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CORPORATE SOCIAL RESPONSIBILITY APPLICATION AND ITS EFFECT ON IMAGES AND TRUST IN PT. ANGKASA PURA I BANDAR UDARA I GUSTI NGURAH RAI

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ABSTRACT

The Aerospace Business developed rapidly in this long time. If the airport service company asked for its assistance to continue for a long period of time to grow the image and trust in the company, it must always service customers' needs to the community and society in general and support economic activities and economic development and empowering and developing economic needs as well as the social conditions of the community. This form of corporate responsibility can be done with the concept of Corporate Social Responsibility (CSR). This research relates to the understanding of CSR to Corporate Image, CSR to Trust, Image to Trust and CSR to Trust through Image. The object of this research is PT. Angkasa Pura I (Persero) I Gusti Ngurah Rai International Airport, Bali. The data source used consists of primary data and secondary data. Primary data obtained through airport user questionnaires and secondary data obtained by PT. Angkasa Pura I (Persero) I Gusti Ngurah Rai International Airport Bali and BPS. The data analysis technique used is quantitative analysis using the Structural Equation Model (SEM) model with the AMOS program. The research conducted has a significant influence on the implementation of CSR on the Company's Image and Trust, and the Corporate Image mediates the effect of CSR on Trust in the Company. The CSR program gives companies access to contribute to the community to surrounding companies, and at the same time will create a positive relationship with the company in the eyes of stakeholders.

KEY WORDS

Corporate social responsibility, trust, stakeholders, Bali.

The development of the business world in Indonesia has not been balanced with improving the level of public welfare and the environment. The development of the business world has not been able to contribute significantly to improving the quality of people's lives. Business activities are expected to hold on to social awareness that contributes and forms real care for the health of the community and helps maintain the environment. The contribution of the form of care and responsibility in the broad sense in question is to use the concept of Corporate Social Responsibility (CSR). Corporate Social Responsibility or commonly known as Corporate Social Responsibility (CSR) is an issue that has been developing for a long time. As is known that parties with interests in the company can be grouped into two, namely internal parties and external parties of the company. As is known, internal companies (management) tend to only think of the profits generated from their business without considering the impact that will be received by external companies in this case consumers and the environment for the company's operations. As part of being integrated with the concept of sustainable development, CSR requires recognition of the right of human beings to live side by side with the various resources that nature has provided.

CSR is a form of corporate responsibility towards its environment for social care and environmental responsibility by not ignoring the capabilities of the company. The implementation of CSR will have an impact on the sustainability of the company. A company in carrying out its activities must base its decisions not only based on mere financial factors such as profits or dividends, but also must base on social consequences in the environment for now and long term. Through CSR, the company frees itself from its goal of only seeking profit by expanding management's responsibility that the company not only has economic responsibility, but also other responsibilities for social life beyond its main obligations. CSR is

not only related to social costs, coercion from the environment, or charitable activities, but also can be a source of opportunity, innovation and competitive advantage. In microeconomics studied the behavior of consumers and companies and the determination of market prices and the quantity of input factors, goods and services that are traded (Sukirno, 2005). Consumers are economic actors who carry out consumption activities. Where they buy or use a product either goods or services. In carrying out activities or activities will certainly appear about the behavior he did, this behavior is better known as consumer behavior. Consumer behavior is a process carried out by a person or organization in the form of activities to find, buy, use, enjoy, evaluate and release products that they have used or enjoyed (consumed) to carry out consumption activities to meet their needs

PT. Angkasa Pura I (Persero) as one of the State-Owned Enterprises (BUMN) always strives to improve the image and trust in the company. The efforts that have been made by the company include through assessments such as the assessment of service quality by Airport Council International, the assessment of clean toilets by the Indonesian Toilet Association, the assessment of the Airport by Bandara Majalah. Besides this, the efforts made by the company are through international standardization of the International Organization for Standardization (ISO) ISO 9001 Quality Management System and ISO 14001 Environmental Management System, 18001 Occupational Health and Safety Assessment Series (OHSAS), and Occupational Health Safety Management System (SMK3) by the Ministry of Manpower. As well as other efforts made by the company are through audits conducted by international institutions, namely Safety Excellence and Security Excellence by the Airport Council International, Security Compliance by the United States Transportation Security Administration (TSA) and the Office of Transport Security (OTS).

The latest picture of image and trust in PT. Angkasa Pura I I Gusti Ngurah Rai Airport - Bali can be seen from several survey results on services and certifications issued by several independent institutions related to products or services produced by airports. Most prominent in the survey of service results of the assessment by the Airport Council International (ACI) which is an International Airport Organization, in a survey by ACI that I Gusti Ngurah Rai Airport - Bali is one of the best airports in the world, namely the Number Airport 3 in the World in 2015 and 2016. Besides the survey by ACI, PT. Angkasa Pura I I Gusti Ngurah Rai Airport - Bali received a service survey from several other institutions such as the Indonesian National Air Carriers Association or the Association of Indonesian Aviation Companies with a 4.53 rating score from the scoring parameters 1-5 Likert scale and 3 Stars Airport by the agency which is quite prestigious in the aviation world namely Skytrax, which is the best result in Southeast Asia from other airports assessed by Skytrax.

In addition to service surveys by institutions both national and international, PT. Angkasa Pura I I Gusti Ngurah Rai Airport - Bali also obtained the certification of the International Organization for Standardization (ISO), namely ISO 9001 concerning Quality Management Systems and ISO 14001 concerning Environmental Management Systems. Related to ISO 14001 certification regarding Environmental Management Systems, I Gusti Ngurah Rai Airport - Bali is the pioneer and the only Airport in Indonesia that has received this certification.

According to Untung (2008), CSR is used to raise the image of the company to get social recognition in carrying out company activities and managing businesses by conducting social activities, expanding business opportunities carried out by the company and can be used to improve relations between stakeholders, employees and the company. And according to Kotler and Lee (2005), CSR that is implemented appropriately, both in the fields of economy, social and environment, will be able to provide many benefits for the company, one of which is being able to improve Corporate Image. If the company carries out its CSR program thoroughly, consumers will have a positive association with the company's CSR program, this association significantly influences their attitude towards the company and can improve the company's image (Lu et al, 2015). Kazi and Chouthoy (2016) in his research journal "En route to a Theory - Building Consumer Brand Commitment through CSR Reputation" suggests that philanthropic actions that are part of CSR will help in building trust.

Satisfying consumers is a difficult thing before gaining their trust, so trust affects customer satisfaction. A consumer who trusts an entity or brand will be satisfied and committed to it.

PT. Angkasa Pura I (Persero) as one of the State-Owned Enterprises (BUMN) has carried out the activities of the Partnership and Community Development Program since 1992, as the Development of Small Business and Cooperatives (PUKK). The company's CSR program aims to encourage people's economic activities and growth, as well as empower and develop economic conditions and social conditions of the community. This is also in line with the company's recent missions, including: Becoming a government partner and economic growth driver, and making a positive contribution to the environment. Furthermore, the organization of the Partnership and Community Development Program unit is based on the determination of the Organization and Work Procedure of PT. Angkasa Pura I (Persero) has since changed into a Corporate Social Responsibility (CSR) unit.

This is also regulated, among others, in the SOE Minister's Regulation Number: PER-09 / MBU / 07/2015 concerning the State-Owned Enterprise Partnership Program and Community Development Program. The regulation states that the BUMN Partnership Program - which is one form of CSR program - is a program to improve the ability of small businesses to become resilient and independent. And the Community Development Program, hereinafter referred to as the BL Program, is an empowerment program for community social conditions by BUMN.

The CSR unit at the Head Office is part of a work unit led by a Head of CSR and is carried out directly by the CSR Department led by a CSR Cooperation Department Head and Corporate Social Environment Department Head. As for the Branch Office, the CSR unit is part of a work unit led by a Sales Department Head, whose implementation is the main activity of the CSR Section Head. The main activities of the Partnership and Community Development Program conducted by PT. Angkasa Pura I (Persero) in both the Head Office and Branch Offices includes the activities of Loan Fund Distribution, Guidance (Education, promotion / exhibition), Provision of Community Development Assistance Funds, and Monitoring of business activities of Patronage Partners. The amount of Corporate Social Responsibility funds that have been channeled by PT. Angkasa Pura I (Persero) I Gusti Ngurah Rai Airport - Bali can be seen in the table below.

Table 1 – Amount of Funds Distribution Corporate Social Responsibility, PT. Angkasa Pura I (Persero) I Gusti Ngurah Rai Airport – Bali

Year	Partnership Program (Rp)	Community Development Program (Rp)
2013	1,990,000,000	752,600,105
2014	2,570,000,000	1,026,693,221
2015	4,000,000,000	736,789,900
2016	3,405,000,000	1,493,995,461

Source: PT. Angkasa Pura I (Persero) I Gusti Ngurah Rai Airport – Bali, 2017.

With this research, it can be seen the implementation or implementation of CSR and how much the relationship of CSR to shape the image and trust in the company, namely PT. Angkasa Pura I (Persero) I Gusti Ngurah Rai - Bali Airport Branch Office by the author.

LITERATURE REVIEW

State-Owned Enterprises are entities owned by the state. Definition of State-Owned Enterprises is a business entity whereby all or part of its capital is owned by the state through direct participation derived from separated state assets (Based on Law of the Republic of Indonesia No. 19 of 2003). According to Darmadjati (2001) the notion of airlines or airlines is a company that is either privately owned or government that specifically serves both scheduled and unscheduled air transport. According to Suharno (2009) Airports are airports that are used for landing and taking off airplanes, boarding passengers and loading and unloading cargo and posts, which are equipped with flight safety facilities and as a place of intermodal transportation. CSR is a form of corporate responsibility towards its environment

for social care and environmental responsibility by not ignoring the capabilities of the company. Solomon (2011), states that consumer satisfaction is an overall feeling of consumers about products or services that have been purchased by consumers. According to Bill Canton in Soemirat & Ardianto (2007) the image is the impression, feeling, picture of the public towards the company; the impression that was intentionally created from an object, person or organization.

RESEARCH HYPOTHESES

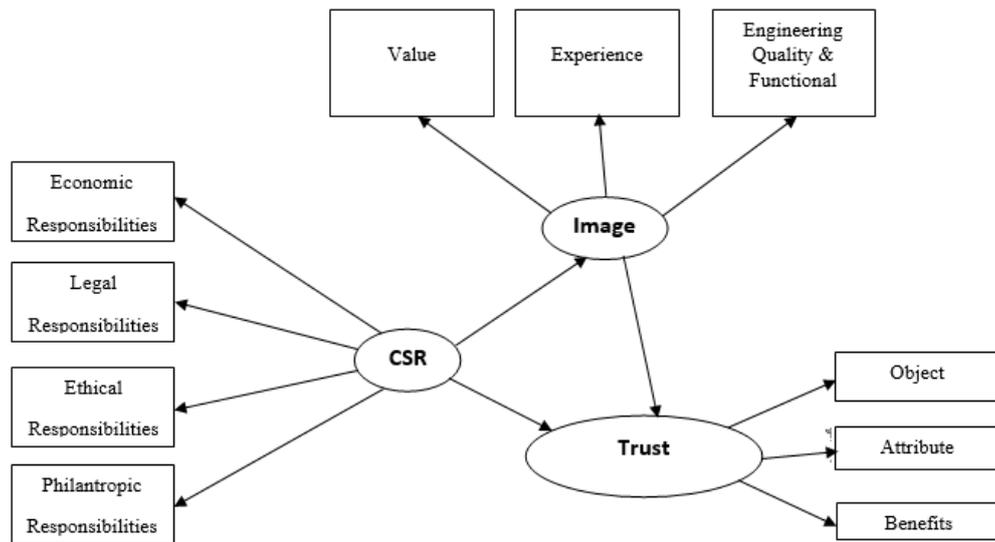


Figure 1 – Thinking Framework

From the literature review and research conceptual framework the following hypotheses are formulated:

- Corporate Social Responsibility (CSR) has a positive and significant effect on the image of PT. Angkasa Pura I (Persero) I Gusti Ngurah Rai Airport Branch Office – Bali;
- Corporate Social Responsibility (CSR) and Image have a positive and significant effect on trust in PT. Angkasa Pura I (Persero) I Gusti Ngurah Rai Airport Branch Office – Bali;
- Corporate Social Responsibility (CSR) indirectly influences trust through Citra at PT. Angkasa Pura I (Persero) I Gusti Ngurah Rai Airport Branch Office - Bali.

METHODS OF RESEARCH

This study uses a quantitative method using a questionnaire instrument. The questionnaire used is the result of adaptation from similar studies that have been done before. The questions are answered using a Likert Scale from 1 to 5. Values indicate strongly disagree, value 2 indicates disagree, value 3 indicates doubt, value 4 indicates agree and value indicates strongly agree. The research was carried out in a representative population and specific sample of service users or passengers of I Gusti Ngurah Rai Airport. The study aims to obtain empirical evidence, test and explain the effect of CSR on Image and Trust in the company (PT Angkasa Pura I, I Gusti Ngurah Rai Airport Branch Office). The population in this study were service users of PT. Angkasa Pura I (Persero) International Airport Branch Office I Gusti Ngurah Rai, in this case is the average passenger departing domestic I Gusti Ngurah Rai Airport each month in 2016 totaling 414,851 people. This is as explained earlier that there are 2 groups or strata in the study sample, namely Full Service Airlines passengers and Low Cost Carrier passengers. While the determination of respondents in this

study using non-probability sampling technique, namely convenience sampling technique (accidental sampling). This method is a sampling procedure that selects samples from people or units that are most easily found or accessed as respondents. Using convenience technique because it is based on the mobility of service users or passengers who are quite high. So the researcher will provide a questionnaire to passengers who can be found and willing to become respondents.

Table 2 – Sample Determination

Number	Types of Passenger Services	Total passenger	Percentage (%)	Number of respondent
1	Full Service Airline	1.772.581	35,61	64
2	Low Cost Carrier	3.205.631	64,39	114
	Jumlah	4.978.212	100	178
	Rata-rata	414.851		

Source: PT. Angkasa Pura I (Persero) I Gusti Ngurah Rai Airport – Bali, 2017.

From the results of the sample calculation of 178 respondents, it will be divided into 2 (two), namely 36% of Full Service Airlines or as many as 64 respondents and 64% of Low Cost Carrier or as many as 114 respondents, in order to represent all types of passengers or airport service users.

RESULTS OF STUDY

This study uses quantitative analysis techniques using the SEM (Structural Equation Modeling) model or the Structural Equation Model with the AMOS program. The assumption of data normality is a test to find out whether the data has a normal distribution. If the value of the critical ratio (CR) of each variable for kurtosis (shunt) is greater than ± 2.58 then the distribution is not normal univariate.

Table 3 – Evaluation of Full Model Data Normality

Variable	min	max	skew	CR	kurtosis	CR
y1.1	2.500	5.000	-.365	-1.988	-.104	-.284
y1.2	2.750	5.000	-.187	-1.021	-.578	-1.573
y1.3	2.200	5.000	-.500	-2.724	.540	1.472
y2.3	2.000	5.000	-.777	-4.231	.324	.884
y2.2	2.500	5.000	-.421	-2.295	-.327	-.890
y2.1	2.670	5.000	-.603	-3.286	-.013	-.035
x1	2.500	5.000	-.355	-1.933	.071	.194
x2	2.500	5.000	-.349	-1.903	-.288	-.783
x3	2.500	5.000	-.302	-1.646	-.275	-.750
x4	2.600	5.000	-.273	-1.489	-.608	-1.657
Multivariate					29.033	12.502

Source: Primary Data.

From the table it is found that the value of critical ratio (CR) on all variables x1 (Economic Responsibilities), x2 (Legal Responsibilities), x3 (Ethical Responsibilities), x4 (Philanthropic Responsibilities), y1.1 (Value), y1.2 (Experience), y1.3 (Technical & Functional Quality), y2.1 (Object Trust), y2.2 (Attribute Trust), and y2.3 (Benefit Trust) are normally distributed due to CR (shunt) value $< \pm 2.58$.

Outlier is an observation condition of a data that has unique characteristics that look different from other data observations and have extreme values in both single and combination variables. Identification of multivariate outliers is done by looking at the value of the mahalanobis distance. This test is conducted to assess the fairness or extreme data. Multivariate outlier detection was carried out based on the value of chi-squares with a degree of freedom = 32, at a significance level of $p < 0.05$. So the value of the mahalanobis distance

(32, 0.05) = 46,194. Therefore if there are cases that have an expensive distance > 46,194 is a multivariate outlier. Following are the multivariate outlier test results:

Table 4 – Result of Multivariate Outlier

Observation number	Mahalanobis d-squared	p1	p2
18	49.469	.000	.000
42	35.226	.000	.000
80	33.518	.000	.000
124	28.359	.002	.000
147	27.773	.002	.000
17	27.465	.002	.000
170	26.045	.004	.000
51	22.891	.011	.001
22	22.683	.012	.000
75	22.429	.013	.000

Source: Primary Data (Top 10 data).

Based on the mahalanobis distance output from the AMOS program, 1 data was found, namely number 18 with a value of more than 46,194. Because the amount of data can be said to be small (1 of 178 data) so that it can be concluded multivariate that there are no data outliers and data must be included in the subsequent analysis.

Multicollinearity evaluation can be seen from the determinant of sample covariance matrix, where values equal to 0 indicate multicollinearity in the data (Ferdinand, 2002). In this study the covariance matrix determinant of sample value was 0.000000083 which means > 0, so it can be concluded that multicollinearity does not occur. This means that SEM assumptions are fully evaluated for multicollinearity.

Confirmatory analysis of exogenous variables in this study is Corporate Social Responsibility (CSR) with Economic Responsibilities (x1) indicators, Legal Responsibilities (x2), Ethical Responsibilities (x3) and Philanthropic Responsibilities (x4). The test results for exogenous variables are:

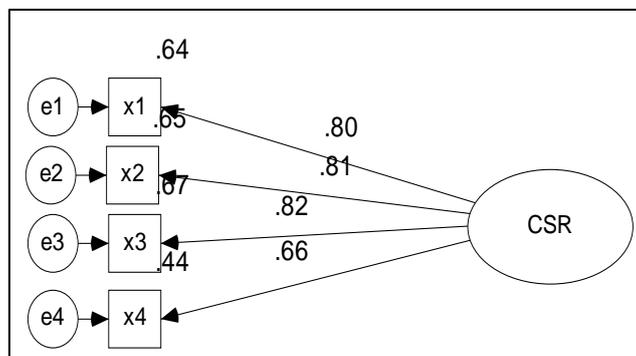


Figure 2 – Confirmatory Factor Analysis of CSR Variable

All indicators in the Corporate Social Responsibility (CSR) variable get a loading value > 0.50 which is Economic Responsibilities (x1) = 0.80, Legal Responsibilities (x2) = 0.81, Ethical Responsibilities (x3) = 0.82 and Philanthropic Responsibilities (x4) = 0.66 which indicate Model statistics are constructed from four variables explaining and defining exogenous constructs. From the four indicators according to the figure above, it can be seen that CSR in the form of Ethical Responsibilities (x3) with a loading value of 0.82 has the most influence on the CSR variable model builder.

The confirmatory analysis of endogenous variables in this study is the Image variable with the Value indicator (y1.1), Experience (y1.2), and Technical & Functional Quality (y1.3), as well as the Trust variable with the Object Trust indicator (y.2.1), Attribute Trust (y.2.2) and Benefit Trust (y.2.3). Test results for Image endogenous variables are:

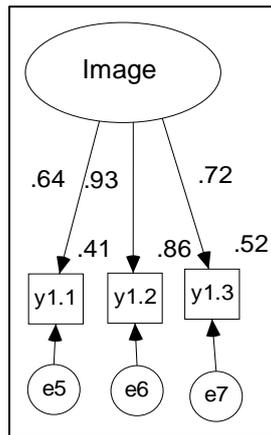


Figure 3 – Confirmatory Factor Analysis of Image Variable

From the image of the Confirmatory Factor Analysis Image Variables, it is known that all indicators in the Image variable get loading values > 0.50, ie Value (y1.1), = 0.64, Experience (y1.2) = 0.93, and Technical & Functional Quality (y1.3) = 0.72, this result indicates statistically the model built from the three variables explaining and defining the image variable construct. From the three indicators according to the picture above it can be seen that according to Experience respondents (y1.3) with a loading value of 0.93 the most influential on the forming of the Citra variable model.

The confirmatory test results for the Trust endogenous variable are:

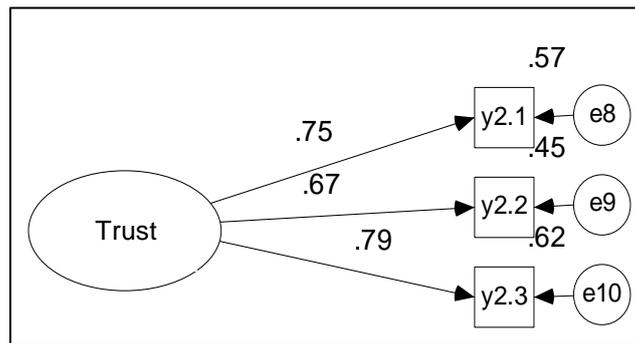


Figure 4 – Confirmatory Factor Analysis of Trust Variable

From the picture of Confirmatory Factor Analysis Variable Trust, it is known that all indicators in the Trust variable get a loading value > 0.50, which is Object Trust (y2.1) = 0.75, Attribute Trust (y2.2) = 0.67, and Trust Benefits (y2.3) = 0.79, this result indicates that statistically the model is constructed from the three variables explaining and defining the construct of the Trust variable. From the three indicators according to the picture above, it can be seen that according to the respondents, the Benefits Trust (y2.3) with a loading value of 0.79 has the most influence on the Trust variable model builder.

After the Measurement Model was tested with Confirmatory Factor Analysis (CFA) and assumptions in the modeling of the Structural Equation Model (SEM) were met, the next step was analysis of the Full Structural Equation Model to determine the suitability of the model and causality built into the model. The results of data processing for analysis of the Full Structural Equation Model can be seen in the following figure 5.

To find out whether the model built statistically can be supported and in accordance with the specified fit model. Tests are carried out using several Goodness-of-fit Indices and cut-offs to test whether a model is acceptable or not. The results of processing data related to Goodness-of-fit Indices on the Full Structural Equation Model are as follows in table 5.

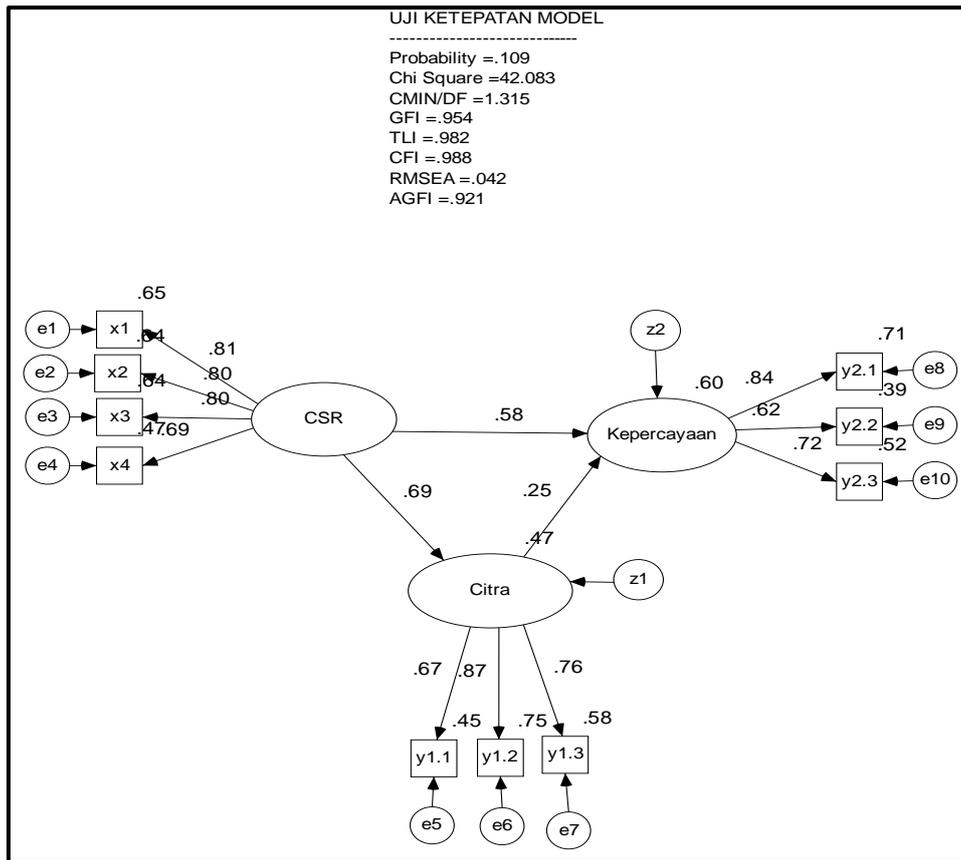


Figure 5 – Full Structural Equation Model Analysis

Table 5 – Goodness-of-fit Indices Variable Full Structural Equation Model

Goodness-of-fit Indices	Cut-off Value	Model Result	Model Evaluation
<i>Chi-square</i>	≤ 46,19426*	42,083	Baik
DF	Positive	32	Baik
<i>Probability</i>	≥ 0,05	0,109	Baik
CMIN/DF	≤ 2,00	1,315	Baik
RMSEA	≤ 0,08	0,042	Baik
GFI	≥ 0,90	0,954	Baik
TLI	≥ 0,90	0,982	Baik
CFI	≥ 0,90	0,988	Baik
AGFI	≥ 0,90	0,921	Baik

Source: Primary Data, 2019.

Based on Table 5, the results of the overall model testing are in accordance with the Goodness-of-fit Indices criteria based on the required cut-off value. Thus for the Full Structural Model the research variables, namely CSR, Image and Trust can be accepted as forming a fit model.

Hypothesis testing of the relationship of quality between research variables is processed using AMOS. Hypothesis testing can be seen from the results of coefficients in the regression weight values listed in column C.R. and P. The value stated in column C.R. must be compared with the critical value of ± 1.96 at the 5% significance level. If the value is C.R. greater than the critical value ± 1.96 at the significance level $p < 0.05$, the proposed hypothesis can be accepted, and vice versa if the value is C.R. smaller than the critical value ± 1.96 at the significance level $p > 0.05$, the proposed hypothesis is rejected. Regression Weight hypothesis testing is shown in the following Table 6.

Regression weight is used to determine the hypothesis significance between exogenous and endogenous variables. The CSR variable for the Image in the Table is obtained by the value C.R. 6,756 with $P < 0.05$. Because the significance of P in the Table is

less than 0.05, which is 0,000, thus H_0 is rejected and H_a is accepted. So it can be concluded that there is a significant relationship between CSR and Image.

Table 6 – Regression Weights

			Estimate	S.E.	C.R.	P	Label
Image	<---	CSR	.666	.099	6.756	***	par_7
Trust	<---	CSR	.684	.151	4.515	***	par_6
Trust	<---	Image	.298	.135	2.209	.027	par_9
x1	<---	CSR	1.012	.108	9.361	***	par_1
x4	<---	CSR	1.000				
x3	<---	CSR	1.062	.116	9.188	***	par_2
x2	<---	CSR	1.036	.111	9.361	***	par_3
y2.3	<---	Trust	1.000				
y2.2	<---	Trust	.748	.098	7.660	***	par_4
y2.1	<---	Trust	.995	.112	8.913	***	par_5
y1.3	<---	Image	1.000				
y1.2	<---	Image	1.127	.109	10.381	***	par_8
y1.1	<---	Image	.891	.107	8.293	***	par_10

CSR Variables towards Trust in the Table obtained C.R values. 4,515 with $P < 0.05$. Because the significance of P in the Table is less than 0.05, which is 0,000, thus H_0 is rejected and H_a is accepted. So it can be concluded that there is a significant relationship between CSR and Trust. The Image Variables for Trust in the Table obtained the value C.R. 2,209 with $P < 0.05$. Because the significance of P in the Table is less than 0.05, which is 0.027, thus H_0 is rejected and H_a is accepted. So it can be concluded that there is a significant relationship between Image and Trust.

DISCUSSION OF RESULTS

PT. Angkasa Pura I (Persero) I Gusti Ngurah Rai International Airport Branch Office Bali has been implementing CSR programs since 1992. The company's CSR program aims to encourage economic activity and growth. This is in line with several company missions, namely becoming a government partner and driving economic growth, and making a positive contribution to the environment. CSR activities carried out include distribution of loan funds, guidance (education, promotion / exhibition), provision of environmental assistance funds and monitoring of activities of assisted partners.

PT. Angkasa Pura I (Persero) International Airport Branch Office I Gusti Ngurah Rai Bali has implemented a CSR program on an ongoing basis starting in 1992, with the total Partnership Program funds being channeled to small businesses in the amount of Rp. 39,293,500,000 (thirty nine billion two hundred ninety three million five hundred thousand rupiahs) and partnership funds channeled to cooperatives in the amount of Rp. 2,507,250,000 (two billion five hundred seven million two hundred fifty thousand rupiahs), as well as the Community Development Program with total funds that have been distributed up to 2017 amounting to Rp. 10,536,316,322 (ten billion five hundred thirty six three hundred sixteen thousand three hundred twenty two rupiahs).

Distribution to fostered partners is done with the intention that the fostered partners can have additional capital to develop their business to become more advanced, broader market and stronger business, such as increasing production capacity and product marketing. Besides the distribution of funds from PT. Angkasa Pura I (Persero) I Gusti Ngurah Rai International Airport Bali also conducts training for MSMEs that aim to gain knowledge that can be applied to increase their respective businesses. In the Community Development Program the company channeled funds to repair religious facilities, public facilities and education, such as building a School Health Unit room, adding a collection of books to grow and increase reading interest (School Literacy Movement), providing tables and chairs in Adat Village around the airport. By looking at the total funds and programs that the company has carried out in implementing CSR, PT. Angkasa Pura I (Persero) I Gusti Ngurah Rai

International Airport Branch Office Bali has been fully committed to running a CSR Program that aims to encourage activities and economic growth and contribute positively to the environment.

Based on Table 6 Regression Weight, it is found that the CSR variable has a direct effect on the Image of 0.666 with a p-value of less than 0.05, which is 0,000, so H_0 is rejected and H_a is accepted. This shows that the better the implementation of Corporate Social Responsibility, the better the image obtained by the Company.

The positive influence of CSR on Corporate Image is in line with the theory put forward by Keraf (2000), which states that the benefits of applying responsibility and social involvement will create a positive image in the eyes of the public. Whereas according to Beekun in Mowen and Minor (2002) CSR can form a positive image of the company.

The results of this study are also in line with the previous research, which was revealed by Abdullah and Azis (2013) in their research that the implementation of CSR has a direct impact on the reputation or image of the company. In addition, according to Huang, et. al (2014) in their study revealed that CSR significantly had a positive effect on company image, service quality, and purchase intention, the corporation or company could improve the company's image with activeness in charity and social welfare activities.

Based on the results of testing the second hypothesis the results show that CSR variables have a direct effect on Trust of 0.684 with a p-value of less than 0.05, which is 0,000, thus H_0 is rejected and H_a is accepted. So it can be concluded that there is a significant influence between CSR and Trust. This shows that the better the implementation of Corporate Social Responsibility, the better the Trust in the Company.

Airport is a service business sector that is airport services that are sensitive to Trust. Establishing trust can be realized with real actions of the company as a form of fulfilling the wishes and needs of the community (expectations) that are constantly developing, one of the real manifestations is the implementation of CSR. Trust of service users will be formed if the company can implement CSR properly, seriously, with quality, continuous, comprehensive in various aspects.

The results of this hypothesis test are in line with previous research, Kazi and Chouthoy (2016) revealed that philanthropic actions contained in CSR will help in forming trust in the company. Whereas Choi and La (2013) suggested that CSR has a positive impact on consumer trust through legal and ethical aspects in implementing CSR. Consumers who believe that companies that are committed to respecting consumer rights and voluntarily satisfying their needs will be easier to trust (Castaldo et.al, 2008).

On the results of the third hypothesis test results obtained that the Image variable directly affects the Trust of 0.298 with p-value less than 0.05, which is 0.027, so H_0 is rejected and H_a is accepted. So it can be concluded that there is a positive and significant influence between Image and Trust. This shows the better the Corporate Image, the better the Trust in the Company.

Image and Trust are but cannot be physically reflected, because images and beliefs are in the mind. Even so, the image and trust can be known, measured and changed. When service users use services at the airport, one of the factors that will be considered is the issue of reputation or image, where the image is an important factor in shaping the trust of a person or service user to the company. If the company has a bad image and often has problems with service users, service users will feel lazy, uncomfortable and reduce their trust in the company. Vice versa, if the company has a good image, then service users will trust and be comfortable in using services or services provided or sold by the company.

The results of this hypothesis test are in line with previous research, that companies that have a positive image will reflect that the company has good and consistent service quality and has good reputation and credibility, therefore consumers will feel confident that the company will provide what they need and as the end result will lead to consumer confidence (Ariszani et. al, 2015). Whereas Fayumi & Tjahjaningsih (2015) revealed that the higher the company's image, the higher the consumer trust. The company's image can be seen as an important publicity tool that tends to strengthen consumer confidence (Nguyen et al, 2013).

Table 7 – Nilai Standardized Direct, Indirect and Total Effect

			<i>Direct Effect</i>	<i>Indirect Effect</i>	<i>Total Effect</i>
Image	<---	CSR	.686	-	.686
Trust	<---	CSR	.583	.169	.752
Trust	<---	Image	.246	-	.246

Based on Table 7 there is an indirect influence between Corporate Social Responsibility (CSR) on Trust mediated by the Image of 0.169. This shows that the Corporate Image mediates the effect of CSR on Company Trust, or it can be interpreted that the Image has an indirect influence on the Corporate Social Responsibility (CSR) variable on Trust, that is by increasing the total effect of CSR on Trust.

CONCLUSION AND SUGGESTIONS

Based on the results of discussion of research, it can be concluded as follows:

- CSR has a direct effect on the Image, which shows that the better the implementation of Corporate Social Responsibility, the better the image the Company can get;
- CSR has a direct effect on trust, this shows that the better the implementation of Corporate Social Responsibility, the better the Trust in the Company;
- The image has a direct effect on trust, so that the better the image of the company, the better the trust in the company;
- The Company's image mediates the effect of CSR on Trust in the Company, or it can also be interpreted that the Image has an indirect influence on the variable Corporate Social Responsibility (CSR) on Trust;
- Overall respondents' assessment of the variables used in the research, namely Corporate Social Responsibility (CSR), Image and Trust can be described on the tabulation of the respondents' answers to getting good results. Of the three variables that get the lowest scores are: ethical responsibilities indicator for CSR variables, technical & functional quality indicators for image variables and attribute trust indicators for trust variables.

After analyzing, discussing and drawing conclusions, the authors provide suggestions as considerations related to the results of the study. The suggestions that can be conveyed are that PT. Angkasa Pura I (Persero) I Gusti Ngurah Rai International Airport further augments monumental CSR programs or is more memorable to the wider community. So that it will increase the positive association of consumers or service users of the company's CSR program, this increase will affect attitudes towards the company and improve the company's image, and will help build trust in the company, and increase the dissemination of information about CSR programs that have been carried out by the company, or service users become more aware of the program, and conduct community need assessments or assessments of community needs, so that the CSR program undertaken becomes more targeted and useful. Improve indicators with the lowest value of respondents' assessment of each variable, namely increasing the company's ethical responsibilities for CSR variables by increasing compliance with applicable standards and norms. Improving technical & functional quality on image variables and attribute trust in the trust variable through increasing the fulfillment of airport services to consumers.

This study has several limitations including:

- Need to do further research regarding the Implementation of Corporate Social Responsibility (CSR) at PT. Corporate Angkasa Pura I (Persero), namely all branch offices in the company, so as to obtain a complete picture of the implementation of CSR that has been carried out by the company and its impact on Image and Trust in the company;
- Research is conducted at certain times for service users who are constantly changing their type and character (dynamic), so that similar research needs to be done in the future to confirm and compare the results of research from several different times.

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THE EFFECT OF PSYCHOLOGICAL EMPOWERMENT ON MOTIVATION AND PERFORMANCE OF HEALTH CENTER EMPLOYEES IN TOMOHON CITY

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ABSTRACT

Employee performance is the result of work used by modern organizations in order to know the level on their achievement of organizational results in accordance with the vision carried. Data were collected from one hundred and eighty eight (188) respondents who filled up questionnaire. The aim of this research is to determine the effects that psychological empowerment have on the motivation and employees performance among all the workers at all Health center of Tomohon City. The results show that psychological empowerment has significant positive impact on motivation. Therefore, the increased of employees psychological empowerment will enhance higher motivation. Motivation proved to have a positive and significant impact on employee performance, so it can be interpreted that with higher work motivation will encourage the creation of better performance. Empowerment proved to have a positive and significant impact on employee performance, therefore increased psychological empowerment of employees will encourage the improvement of better employee performance. In conclusions, motivation is a good mediator to channel the positive impact that psychological empowerment have on employee performance at all Health center of Tomohon City.

KEY WORDS

Psychological empowerment, motivation, employee, performance.

The development of a country is also determined by the quality of the health of its people as human resources that contribute to the progress of the nation (Irfan and Ijaz, 2011). The 1945 Constitution of the Republic of Indonesia in Article 28 H stipulates that health is the basic right of life for every individual and all citizens are entitled to health services. The public health service system is an organization with a complex network and has individuals working together for public health interests (Revere et al., 2011). All aspects of the health service sector are asked to measure their performance and to demonstrate efficiency and effectiveness in order to provide services to their clients (Weir et al., 2009).

Health center are functional organizational units in the field of basic health services that function as (1) health development centers, (2) fostering community participation, (3) comprehensive and integrated health services, which are in line with the concept that health center are responsible for working areas established (Nugroho, 2004). The Health center is a public health service facility that is responsible for the health of the community in its working area (Wibowo, 2009). Basically, quality health services must also be supported by human resources who have quality and performance that supports health care systems that have competitive advantages (Holmes et al., 2006). In order for public health care services in the health center to materialize, nursing services need to be improved. The quality indicators of community nursing services are services performed professionally. Health care professionalism essentially provides services to the community according to standards (Nugroho, 2004).

The service at the hospital, nurses are one of the health professions that play an important role in caring for and serving people who are directly ill. In his daily duties, a nurse is often faced with an attempt to save one's life or life. Regarding the scope of work nurses are always faced with monotonous and routine things. In carrying out their roles and

functions nurses are required to have high expertise, knowledge and concentration. In addition, a nurse is faced with the demands of professional idealism and often faces various kinds of problems both from patients and colleagues. It can all cause feelings of stress on the nurse, so that it is easy to experience a decrease in motivation in work (Makatiho, 2013).

One form of activity to provide motivation is empowerment efforts. Empowerment means efforts to encourage subordinates to motivate themselves (Ratnawati, 2004). Empowerment of employees is one strategy to realize employees who excel in their performance. Empowerment is one of the development of employees through employee involvement, namely by giving sufficient responsibility to complete tasks and decision making (Kadarisman, 2012). Employees who have felt empowered will have a higher level of work motivation (Rahmasari, 2011). To be able to empower employees in an organization, management must be able to provide access to support the achievement of employee empowerment (Regan, 2011). With empowerment, employees will be able to accommodate customer requests and achieve the highest standards of service quality. Employees are permitted to use their personal initiatives and their judgment in carrying out their duties (Chow et al., 2006).

In addition to empowerment, management of human resources in organizations is that companies must be able to unite perceptions or perspectives of employees and organizational leaders in order to achieve organizational goals, among others through the formation of good mental work with high dedication and loyalty to their work, providing work motivation, guidance, direction and good coordination in working by a leader to subordinates (Brahmasari and Suprayetno, 2008). Motivation has long been the task of management in order to improve employee performance. Motivation will affect the increase in performance, and decrease the level of turnover and absenteeism. Decreasing work morale is a characteristic and lack of motivation felt by most workers (Bangun, 2012). Wayne et al. (1997) in Chow et al. (2006) found that organizational support at a high level creates a sense of obligation, where employees not only feel that they must commit to management, but also feel obliged to repay the favor by putting more effort into their work. When employees feel they part of the organization, employee commitment will develop and their performance increases (Ghafoor et al., 2011).

In the Health Ministry recapitulation data of the Indonesian Ministry of Health, North Sulawesi has 192 health centers spread across 16 regencies and cities. Tomohon City has 7 health centers consisting of 2 non-care health centers and 5 health centers. The Tomohon City Health Center has the task as a District / City health technical implementation unit (UPTD) which is responsible for organizing the health development of the Tomohon area. Tomohon City Health Center as the first stratum health service center conducts first-level health services in a comprehensive, integrated, and sustainable manner, which includes individual health services and public health services. The Tomohon City Health Center conducts activities including public health efforts as a form of health development effort. The study was conducted at seven Tomohon City Health Centers with research areas in all parts of the Health center operations. Based on the results of observations and interviews, several reasons were found which obstacles to the decline in employee performance were. Employees have low work initiatives because of the lack of opportunities for them to work independently. In addition, employees have less motivation because they choose to work alone and feel they are on a team that cannot provide support and assistance. There are still employees of the Tomohon City Health Center who arrive late and do not comply with the stipulated time rules which can trigger a decrease in the performance of employees and organizations if there is no follow-up from the agency.

This study aims to analyze (1) the effect of psychological empowerment on motivation; (2) the influence of motivation on employee performance; (3) the effect of psychological empowerment on employee performance.

LITERATURE REVIEW

Performance is a condition that must be known and informed to certain parties to find out the level of achievement of the results of an agency associated with the vision carried out by an organization and knowing the positive and negative impacts of an operational policy taken (Chasanah, 2008). Empowerment is one way of developing employees through employee involvement, namely by giving sufficient responsibility to complete tasks and decision making (Kadarisman, 2012). Empowerment can be viewed from two perspectives namely structural perspective and psychological perspective (Mario, 2010). Viewed from an organizational (structural) point of view, empowerment is the process of encouraging employees to set the goals of their work, and to provide greater capacity, responsibility, or authority to make decisions within the scope of their own work aimed at increasing engagement (Job Involvement) and employee job satisfaction to improve the quality of production and service (Mario, 2010). Viewed from the point of view of human resources (psychological), empowerment is the giving of opportunities and encouragement to employees to utilize their talents, skills, resources, and experience to complete work in a timely manner or in other words as feeling meaningful, capable, control their own work and have an important impact on society (Mario, 2010). Mathis and Jackson (2006) say, motivation is a desire in someone causing the person to do something. Someone takes action for something to achieve the goal. Motivation can be defined as an action to influence other people to behave regularly.

RESEARCH HYPOTHESES

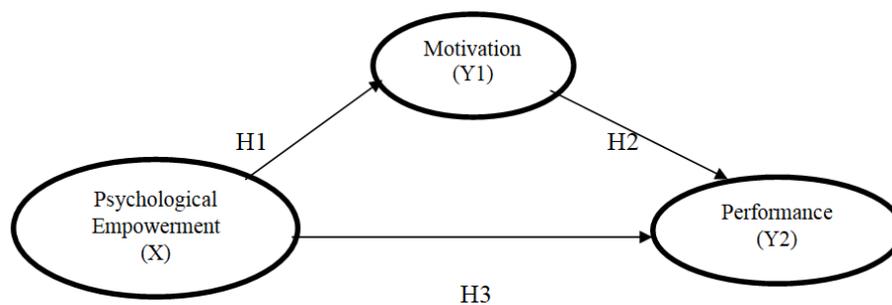


Figure 1 – Research Framework (Source: concept developed in this study, 2015)

H1: Psychological Empowerment has a positive and significant influence on motivation;
 H2: Motivation has a positive and significant influence on employee performance;
 H3: Psychological Empowerment has a positive and significant influence on employee performance.

METHODS OF RESEARCH

Based on the problems studied, this study belongs to associative research (relationship), namely the causal relationship between variables of psychological empowerment, motivation and employee performance. This research was conducted at the Health center in the administrative area of Tomohon City. The reason behind the researchers conducting research at the Tomohon City Health Center is that this organization is a public service organization that is relied on by the community, both at the City and Village levels and is one proof of government work that can be directly felt by the community. Health center are expected to be able to provide quality and professional services. For this reason, it is necessary to empower psychological staff to achieve goals effectively. This study uses employee motivation and employee performance as organizational supporting factors in improving ability to achieve the highest standards of service quality. The object of research in this study is psychological empowerment, motivation and employee performance. The

method of data collection in this study was conducted with several data collection techniques, namely, interviews, questionnaires, observations and literature. The analysis techniques used were confirmatory factor analysis and path analysis. The population used for this study was 366 people in all the Health center staff in Tomohon City, North Sulawesi Province.

In this study used the proportionate stratified random sampling technique using formulas from Isaac and Michael in, Sugiyono (2013: 158). Based on the formula in with a population of 366 people and precision of 5%, it is calculated as 188.

The number of samples is obtained based on the location of the Health center which can be seen in Table 1. The number of samples based on the department obtained will be searched randomly at the employees of each Health center unit in Tomohon City.

Table 1 – The composition of the Health center sample in the city of Tomohon based on the location of the health center

No	Health center	Total population	Sample
1.	Pangolombian	50	26
2.	Lansot	55	28
3.	Matani	55	28
4.	Rurukan	45	23
5.	Tara-tara	61	32
6.	Tinoor	45	23
7.	Kakaskasen	55	28
	Total		188

Source: Data Processed, 2015.

The population consisting of 366 employees with a sample of 188 employees can be grouped based on the type of position or profession, namely Doctors, Dentists, Nurses, Dental Nurses, Midwives, Pharmacists, Pharmacist Assistants, Physiotherapists, Nutritionists, Sanitarians, Extension and Administration who can see in Table 2 below.

Table 2 – The composition of the Health center sample in the city of Tomohon is based on the position of the health center staff

No	Position	Total population	Sample
1.	Doctor	29	18
2.	Nurse	190	93
3.	Dentist	19	8
4.	Midwife	44	23
5.	Pharmacist	19	8
6.	pharmacist assistant	10	5
7.	Physiotherapist	11	6
8.	Nutritionist	10	5
9.	Sanitarian	13	8
10.	Extension	12	7
11.	Administration	12	7
	Total		188

Source: Data Processed, 2015.

RESULTS OF STUDY

Confirmatory factor analysis is used to test whether the indicators used are really indicators of a variable. The confirmatory factor analysis stages are as follows.

Bartlett's Test Value Test has a significance value less than the real level (sig <0.05). The results of the analysis can be seen in Table 3.

Table 3 shows that the Chi-square value for each variable has a significance value below 0.05, so this means that each item in the instrument has a strong correlation value so that it is feasible to be used in factor analysis.

Table 3 – Correlation Coefficient of Variable Matrix

No	Variable	Chi-square	Sig
1	Empowerment	238,097	0,000
2	Motivation	658,614	0,000
3	Performance	369,629	0,000

Source: Data Processed, 2015.

Factor analysis is said to be feasible if the KMO amount is at least 0.5. The results in this study can be seen in Table 4.

Table 4 – Kaiser Mayer Olkin Test (KMO)

No	Variable	KMO	Ket.
1	Empowerment	0,717	Valid
2	Motivation	0,897	Valid
3	Performance	0,840	Valid

Source: Data Processed, 2015.

Table 4 shows that Kaiser Mayer Olkin (KMO) value for each variable is greater than 0.5. This means that each variable has sufficient sample to carry out factor analysis.

The MSA value of each variable must be greater than 0.5. The results of the analysis can be seen in Table 5. Table 5 shows the value of MSA for each variable indicator has a value greater than 0.5, so this means that the model used is feasible to be used in the factor analysis model.

Table 5 – Analysis Measure of Sampling Adequacy (MSA)

No	Variable	Question Items	MSA Value
1	Psychological Empowerment (X)	X1	0,701
		X2	0,707
		X3	0,729
		X4	0,730
2	Motivation (Y ₁)	Y1.1	0,875
		Y1.2	0,896
		Y1.3	0,900
		Y1.4	0,892
		Y1.5	0,930
		Y1.6	0,889
3	Performance (Y ₂)	Y1.7	0,897
		Y2.1	0,840
		Y2.2	0,834
		Y2.3	0,862
		Y2.4	0,862
		Y2.5	0,809

Source: Data Processed, 2015.

Determination of the number of factors is determined based on factors that have an eigenvalue greater than / equal to 1. This is based on the percentage of variance of a factor that is considered by the customer if it has a value greater than 60 percent.

Table 6 – Eigen Value

No	Variable	Eigen Value	Cumulative Variance (percent)
1	Psychological Empowerment	2,458	61,441
2	Motivation	4,305	61,501
3	Performance	3,128	62,556

Source: Data Processed, 2015.

Table 6 shows that the eigen value of each variable is greater than 1, and the percentage of variance value is greater than 5 percent, this means that each variable,

psychological empowerment (X) and motivation (Y1) is a variable that affects performance (Y2), so it is feasible to be used in the model.

The loading factor of the dependent variable in this study is work motivation (Y1) which has seven indicators and employee performance (Y2) which consists of five indicators, and the independent variable (x) which is psychological empowerment which has four indicators. The results of loading factors can be seen in Table 7.

Table 7 – Value of Factor Loading

No	Variable	Indicators	Factor Loading	Information
1	Psychological Empowerment (X)	X1	0,716	<i>Valid</i>
		X2	0,841	<i>Valid</i>
		X3	0,794	<i>Valid</i>
		X4	0,780	<i>Valid</i>
2	Motivation (Y1)	Y1.1	0,739	<i>Valid</i>
		Y1.2	0,765	<i>Valid</i>
		Y1.3	0,800	<i>Valid</i>
		Y1.4	0,816	<i>Valid</i>
		Y1.5	0,803	<i>Valid</i>
		Y1.6	0,776	<i>Valid</i>
		Y1.7	0,787	<i>Valid</i>
3	Performance (Y2)	Y2.1	0,743	<i>Valid</i>
		Y2.2	0,827	<i>Valid</i>
		Y2.3	0,772	<i>Valid</i>
		Y2.4	0,789	<i>Valid</i>
		Y2.5	0,820	<i>Valid</i>

Source: Data processed, 2015.

Table 7 shows that the value of loading indicator variables for psychological empowerment (X), work motivation (Y1) and employee performance (Y2) is greater than 0.4. This means that all indicators of each variable meet the requirements and show a strong correlation.

From the formed path model, there are two structural equations or simultaneous equation systems. Forms of structural equations for the Path Analysis model used are:

$$\text{Structural Equations 1: Motivation} = \beta_1 \text{Psychological Empowerment} + e_1$$

$$\text{Structural Equations 2: Performance} = \beta_2 \text{Motivation} + \beta_3 \text{Psychological Empowerment} + e_2$$

From the results of data processing with SPSS, the structural equation model or the system of simultaneous equations for the first structure and the second structure includes the results of direct effect testing and testing of mediating variables, showing results as in Tables 8 and Table 9.

Table 8 – Recapitulation of Structure Regression Results 1

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	Beta	Std. Error	Beta		
(Constant)	1.194	0.205	0.695	5.814	0,000
PD	0.677	0.051		13.194	0,000
R ² : 0,483					
F Statistik: 174,076					
Sig.F: 0,000					

a. Dependent Variable: Motivation.

Source: Data Processed, 2015.

Based on the results of the regression analysis in Table 8 it was found that Psychological Empowerment had a positive and significant effect on Motivation. This is indicated by a significant test of the Psychological Empowerment variable of 0.000 which is smaller than 0.05. The magnitude of the variable path coefficient of Psychological

Empowerment is 0.695 which means that the contribution of Psychological Empowerment to Motivation is 69.5%.

The error value of this structural model 1 can be calculated using the formula:

$$Pe_1 = \sqrt{(1 - R_1^2)} = 0,719$$

The error value of 0.719 means that the motivation variant is 71.9% determined by variables outside the model (variable Psychological Empowerment).

Table 9 – Recapitulation of Structure Regression Results 2

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	Beta	Std. Error	Beta		
(Constant)	0,181	0.209		0,865	0,388
PD	0.319	0.67	0.297	4,763	0.000
MO	0.613	0.69	0.556	8,910	0.000
R ² : 0,628					
F Statistik: 155,925					
Sig.F: 0,000					

a. Dependent Variable: Performance.

Source: Data Processed, 2015.

Based on the results of the regression analysis in Table 9, it was found that Psychological Empowerment and Motivation had a significant positive effect on Employee Performance. This is indicated by the significance of the t test of the Psychological Empowerment variable of 0.000 and the significance of the t test of the Motivation variable of 0.000 which is smaller than 0.05. The magnitude of the variable path coefficient of Psychological Empowerment is 0.297, which means that the contribution of Psychological Empowerment to employee performance is 29.7%. The magnitude of the path coefficient of the Motivation variable on employee performance is 0.556, which means that the contribution of motivation to employee performance is 55.6%. This indicates that the high and low performance of 55% is determined by motivation. The error value of this structural model 2 can be calculated by the formula:

$$Pe_2 = \sqrt{(1 - R_2^2)} = 0,609$$

The error value of 0.609 means that the variant of Employee Performance 60.9% is determined by variables outside the model (outside the variables of Psychological Empowerment and Motivation).

Data analysis to test the hypothesis about the effect of Psychological Empowerment on using structural equations without mediation. The results of data analysis to examine the effect of the variable Psychological Empowerment on Employee Performance are presented in Table 10.

Table 10 – Recapitulation of Results of Regression without Mediation

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	Beta	Std. Error	Beta		
(Constant)	0.913	0.230		3.975	0.000
PD	0.734	0.057	0.684	12.788	0.000
R ² : 0,468					
F Statistik: 163.539					
Sig.F: 0,000					

a. Dependent Variable: Performance.

Source: Data Processed, 2015.

Based on the results of the regression analysis in Table 10, it was found that Psychological Empowerment had a positive and significant effect on Performance. This is indicated by a significant test of the Psychological Empowerment variable of 0.000 which is smaller than 0.05. The magnitude of the variable path coefficient of Psychological Empowerment is 0.684, which means that the contribution of Psychological Empowerment to Motivation is 68.4%.

The error value of this structural model 3 can be calculated with formulation:

$$Pe_3 = \sqrt{(1 - R_1^2)} = 0,729$$

An error value of 0.729 means that the performance variant of 72.9% is determined by variables outside the model (variable Psychological Empowerment).

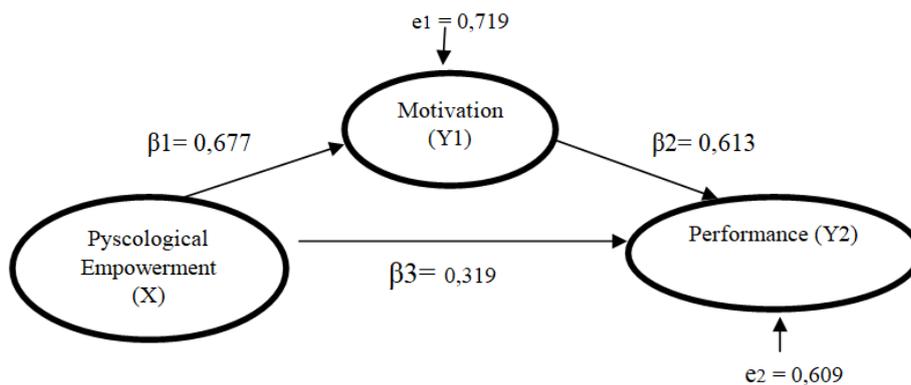


Figure 2 – Final Path Chart Model

After knowing the value of the path coefficient and standard error, it can be calculated the indirect effect and total effect of the variable psychological empowerment on the performance of employees in the Tomohon City Health Center. From the calculation results obtained the following results:

- From the calculation of the indirect effect of psychological empowerment on employee performance through Motivation ($\beta_1 \times \beta_2$) = (0.677 x 0.613) in the Tomohon City Health Center it was obtained 0.386 which means that indirect influence of psychological empowerment on performance through motivation in Tomohon City Health Center was 0.386 or 38.6%;
- From the calculation of the total effect on the performance of Tomohon City Health Center employees ($\beta_3 + \beta_1 \times \beta_2$) = (0.319 + 0.677 x 0.613) the results are 0.683. The result of 0.683 means that the influence of psychological empowerment and motivation variables on employee performance in Tomohon City Health Center is 0.683 or 68.3%.

The goodness of fit test can be seen from the goodness of fit structural model in the path analysis in the form of the Total Determination Coefficient (R^2_m), which is calculated based on the R^2 value of each endogenous variable. The model is said to be fit if supported by empirical data. By paying attention to the results of path analysis as presented in Table 5.12 and Table 5.13, it is known for the motivation variable (Y1), the value of $R^2 = 0.483$ and for the performance variable (Y2) obtained $R^2 = 0.628$.

$$R^2_m = 1 - (Pe_1)^2 - (Pe_2)^2 = 0,81$$

The total determination value of 0.81 means that 81% of empirical data can explain the model or the model is said to be good. Thus, the model is feasible to provide an explanation and testing of the hypothesis.

To test the significance of the mediating role of the motivational variable, the Sobel formula is used. The results are obtained as follows:

Ho: Motivation is stated not to mediate the relationship between Psychological Empowerment and Employee Performance.

H₁: Motivation is stated to mediate the relationship between Psychological Empowerment and Employee Performance.

Based on the path diagram of indirect influence, it can be calculated The standard error coefficients a and b are written with S_a and S_b, the standard size of indirect effect S_{ab} is calculated by the following formula:

$$S_{ab} = \sqrt{b^2 S_a^2 + a^2 S_b^2 + S_a^2 S_b^2} \quad S_{ab} = 0,0558$$

To test the significance of the indirect effect it is necessary to calculate the z value of the ab coefficient, and the value is 6,92.

From the calculation results, the ratio of z count is 6.92 > z table is 1.96, then Ho is rejected and Hi is accepted. This means that motivation mediates the relationship of psychological empowerment to employee performance at the Tomohon Health Center, so that it can be said that motivation is a mediating variable the influence of empowerment on employee performance. The determination coefficient for the regression equation with the mediating variable is 55.6%, which means that the variation that occurs on employee performance is caused by psychological empowerment through motivation of 55.6%, while the remaining 44.4% is due to other variables not analyzed, while the results of coefficient of determination for the regression equation without mediation variables obtained at 68.4%.

DISCUSSION OF RESULTS

Effect of Psychological Empowerment on Motivation. The first hypothesis is the hypothesis which states that Psychological Empowerment has a positive and significant influence on Motivation. Psychological Empowerment (X) is proven to have a positive and significant effect on motivation (Y1), which is indicated by the path coefficient value of 0.677, with a significance level or p-value = 0,000, which means very significant.

In this study found a positive and significant influence between psychological empowerment and motivation. The path coefficient has a positive sign, it can be interpreted that the increasing implementation of psychological empowerment of employees will be able to encourage the creation of higher work motivation. This shows that psychological empowerment measured by indicators: meaning, competence, self determination and impacts can increase the motivation of employees in the Tomohon City Health Center to be greater. This can be interpreted that if the employee gives the best effort at work, has the confidence in the ability to work, is responsible for the work and believes that the work done will have an impact on the agency, thus making these employees tend to have higher motivation so that they feel comfortable and motivated in carrying out their work. Thus, then hypothesis 1 that reads, psychological empowerment has a positive and significant effect on motivation, supported.

Effect of Motivation on Employee Performance. The second hypothesis states that Motivation has a positive and significant influence on Employee Performance. Motivation (Y1) is proven to have a positive and significant effect on performance (Y2), which is indicated by the path coefficient value of 0.613, with a significance level or p-value = 0,000, which means it is very significant.

In this study found a path coefficient marked positive, it can be interpreted that increasing employee motivation will be able to encourage the creation of better performance. This shows that employee motivation as measured by indicators: reward systems, salary, interpersonal relations, responsibility, knowledge / training and information can improve the performance of Tomohon City Health Center employees to be higher. This can be interpreted that if the employee gets enough rest time, receives overtime fees, has a good relationship with his boss and coworkers, is able to operate the tool, has the opportunity to communicate ideas about work and has the knowledge needed to do work assignments, thus being able to improve better performance at Tomohon City Health Center employees. Thus, then

hypothesis 2 that reads, motivation has a positive and significant effect on performance, supported.

The Effect of Psychological Empowerment on Employee Performance. The third hypothesis states that Psychological Empowerment has a positive and significant influence on Employee Performance. Psychological Empowerment (X) proved to have a positive and significant effect on performance (Y2), which is indicated by the path coefficient value of 0.319, with a significance level or p-value = 0,000, which means it is very significant.

In this study it was found that the path coefficients were positively marked, meaning that increasing the implementation of psychological empowerment of employees would be able to encourage better performance. This shows that psychological empowerment is measured by indicators: meaning, competence, self-determination and impacts can improve the performance of Tomohon City Health Center employees to be higher. This can be interpreted if the employee feels the work done is very meaningful, always wants to give the best for the agency, has the ability to do work in detail, has the opportunity to work independently, has confidence in dealing with patients, thus the employee of Tomohon City Health Center is able improve their performance for the better. Thus, hypothesis 3 which reads, empowerment has a positive and significant effect on acceptable performance.

Research Limitations:

Research only uses path analysis analysis techniques, which should be able to be further developed with other analysis techniques, such as: PLS, confirmatory and SEM analysis, multiple linear regression and AMOS.

Research uses only one independent variable, Psychological Empowerment, which should be developed again by adding other independent variables such as Structural Empowerment. Research uses only one independent variable, Psychological Empowerment, which should be developed again by adding other independent variables such as Structural Empowerment.

CONCLUSION AND SUGESSTIONS

Psychological empowerment has a positive and significant influence on motivation, meaning that the greater the application of empowerment to employees will have an impact on the increasing motivation of employees in the Tomohon City Health Center.

Motivation has a positive and significant influence on employee performance, meaning that the higher the motivation to work for employees will have an impact on increasing employee performance in the Tomohon City Health Center.

Psychological empowerment has a positive and significant influence on employee performance, meaning that the greater the application of empowerment to employees will have an impact on increasing employee performance at the Tomohon City Health Center.

Employee motivation is able to mediate a positive relationship of psychological empowerment to employee performance, meaning that high work motivation has a positive role in increasing psychological empowerment for employees so that it can produce high employee performance.

Based on the conclusions above, the suggestions given are as follows.

The head of the Tomohon City Health Center must improve the empowerment of employees, for example, provide more opportunities for employees to take part in decision making and work independently so that they can take more initiative and be more responsible in their work.

The leadership of the Tomohon City Health Center considers the policy of overtime or allowance costs for employees who have a workload that exceeds the rules of the Health center such as when they have to work during holidays or work outside the service area.

The leadership must encourage employees to comply with the activity schedule at the Tomohon City Health Center as well as work time rules so that no more employees arrive late or have to work beyond the specified working hours.

For further research, it is recommended that using analytical techniques that are more able to develop research results in this case using PLS analysis.

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**THE IMPROVEMENT OF EXCELLENT SERVICE
THROUGH THE IMPLEMENTATION OF ONE-STOP SERVICE: A STUDY
IN THE INTEGRATED LICENSING SERVICES OFFICE OF BREBES REGENCY,
CENTRAL JAVA OF INDONESIA**

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ABSTRACT

This study aimed to describe the process of implementing one stop service and to describe the factors that influence the implementation of one stop service to improve excellent service at Integrated Licensing Services Office of Brebes Regency. The research was conducted at Integrated Licensing Services Office of Brebes Regency with qualitative descriptive approach. Research targets are all concerned with the process of the implementation of one stop service to improve excellent service at research location. The sampling technique using a combination of purposive and snowball sampling techniques, through in-depth interviews, observation, documentation, and literature study while data analysis using an interactive model. The result of the study concluded that implementation of one stop service to improve excellent service at Integrated Licensing Services Office of Brebes Regency has not been effective and has not been accordance with the one stop service guidelines. There are still obstacles in the implementation of which several types of licenses still in process at the technical office that prolong the licensing process, there is no integration with investment activities, license settlement overtime, standards of service, and institutions that do not fit the guidelines, and the limited of facilities and budgets. Factors that affect the implementation of one stop service to improve excellent service at Integrated Licensing Services Office of Brebes Regency, among other factors, namely (1) communication, (2) resources, (3) the disposition and (4) the structure of the bureaucracy. These factors indicate the relationship between the factors and mutual influence on the process of implementation due to the constraint in these factors the implementation is not effective so that excellent service cannot be realized.

KEY WORDS

Implementation, one-stop service, excellent service, public service.

Services in the licensing sector do not escape the spotlight in its implementation, because licensing service is one of the forms of public services. Services in the licensing sector such as Building Construction Permits, Disturbance Permits, Location Permits, Advertising Permits, Trading Business Permits, and other permits that are the authority of the regional government are one form of public service included in the administrative service group. In its implementation, public services in some regions are still often characterized by service problems that make it difficult to be accessed by the public. There are still a lot of inadequate service provisions including those related to licensing services. Good quality of public service is still far from the expectations, for which there is still full service with bureaucracy that is convoluted, complicated, slow, expensive, and tiring.

In order to overcome the problems in the licensing services sector and provide convenience and ease for the public, business people, and investors in managing permits, the government issued One Stop Service (OSS) policy that is first regulated by Minister of Home

Affairs Regulation No. 24 of 2006 concerning Guidelines Implementation of One-Stop Services. In the regulations, it is explained that the Implementation of One-Stop Services is licensing and non-licensing service activities which management process starts from the application stage until the document issuance stage is carried out in one place.

The government of Brebes Regency responded to the government's policy regarding OSS through the Regent's Regulation No. 006 of 2006 concerning The Establishment of Organization and Work Procedure of Brebes Regency Integrated Service Office. The Integrated Service Office (ISO) is the beginning of the establishment of a one-stop service (OSS) unit in Brebes Regency. In its development, the name of organization of regional apparatus was carried out with the issuance of Regional Regulation of Brebes No. 7 of 2008 concerning Organization and Work Procedure of Regional Technical Institutions, Inspectorates, Civil Service Police Units, and Other Institutions of Brebes Regency. In the regional regulations, there are changes in organization and work procedures from the Integrated Service Office (ISO) to the Integrated Licensing Service Office (ILSO/KPPT) of Brebes Regency.

After the ILSO of Brebes Regency was formed and carried out its duties for approximately 10 years, there were several problems in its implementations based on the initial observations from researchers. The problems include the implementation of licensing services that are less effective, such as the granting of Building Construction Permits, Public Transportation Route Permits, Tourism Business Registration, and Establishment of Health Facilities Permits for clinics and hospitals, where applicants must get technical recommendations from related agencies/institutions first and then arrange permission from the ILSO. This is certainly very troublesome for the applicant, because they have to go back and forth to several places first to get their early permission before submitting requests for permission to the ILSO.

Another problem is that the implementation of OSS by the regency/city government according to Presidential Regulation No. 97 of 2014 concerning the Implementation of OSS is carried out by Regency/City One-Stop Services and Investment Service, but in Brebes Regency, until today it is still in the form of an office, which is the Integrated Licensing Service Office (ILSO).

In the initial observation, researchers also found that there were licensing issues related to spatial planning, as written in *suaramerdeka.com* in October 2, 2014 with the title of 'Garment Development in Brebes was stopped by Local Authorities'. It happened because they did not have Building Construction Permits and was considered violating its land use. In *brebesnews.co*, on March 20, 2014, there was an article entitled '38 Local and Foreign Investors was hampered by Brebes Regional Regulations'. In this article, it was stated that when applying for company licenses, the company argued that the land they occupied was unproductive rice fields, which in the regional regulations it included in the spatial layout of the industrial area, yet suddenly there were many residential settlements which had not yet own the Building Construction Permits. These finding indicate that there is a lack of public order towards licensing and lack of supervision by the authorities on the activities of building construction. Some of these problems can provide a preliminary description that the implementation of one-stop service carried out by the Integrated Licensing Service Office of Brebes Regency is still faced with problems or obstacles in its implementation. Based on the background of the problem mentioned above, the research problems are:

- How does the implementation of one-stop service in the Integrated Licensing Service Office of Brebes Regency?
- What factors influence the implementation of one-stop services in the Integrated Licensing Service Office of Brebes Regency?

LITERATURE REVIEW

Public service is defined as all forms of public service activities carried out by government agencies at the state, regional, and in state/regional business entities in the form of goods and services, both in the context of efforts to fulfill community needs and in the

implementation of statutory provisions (Hartati, et al., 2013). Based on Law No. 25 of 2009 concerning Public Services, public service is carried out by public service providers, namely every state administering institutions, corporations, independent institutions established by law for public service activities, and other legal entities formed solely for public service activities. Sinambela (2011) stated that public services is the fulfillment of people's wants and needs by state administrators that is established to improve welfare and satisfy the public as service users. This satisfaction can be achieved by providing excellent service, namely services that are open, easy, accessible to all parties in need, provided adequately, and easily understood (Ismayanti, 2015). Ginting, et al. (2018) added that public service quality is related to organizational capabilities in serving the community. Therefore, it needs to be managed properly through excellent service management.

The improvement of service quality is needed in all sectors of the organization, including public sector organizations. The concept of quality according to Gaspersz (2005) is conventionally interpreted as a description of the direct characteristics of a product such as performance, reliability, ease of use, and aesthetics. Strategically, quality is interpreted as everything that is able to meet customer desires or needs.

According to Fryer, et al. (2007), the improvement of service quality is necessary since organizations are always faced with higher demands along with demographic and social changes that occur. Organizations are asked to give their best and are required to always increase their accountability and transparency. Boyne (2003) explained that the improvement of public service is a dynamic phenomenon, inherently raises questions about justice, and is usually related to the performance of multi-organizational networks rather than the achievement of a single organization.

Boyne (2003) divided the improvement of public service quality into five models, namely: (1) the goal model, which emphasizes changes in substantive standards of service; (2) the resource-system model, which focuses on the capacity of service providers to obtain technical input from their environment; (3) internal process model, which shows that most attention must be given to how these inputs are used in the organization; (4) competing values model, which tries to combine all of these perspectives into a universally valid set of evaluative criteria; and (5) the multiple consistency model, which implies that improvement exists only in the eyes of organizational stakeholders.

The hierarchical and long bureaucratic structure is considered to be an obstacle for the community to fulfill their needs in various specific fields. One of the efforts made by the government to improve excellent service in public sector organization is one-stop service, which is the pattern of public services that carried out in an integrated manner in a place by several government institutions in accordance with their specific authorities.

According to Trochidis, et al. (2008), an integrated public service system promises smooth service delivery from various government organizations and create efficiency and experience of service for service providers as well as service users themselves. This model is called one-stop service, one-stop government, or single access point, which is the integration of public service from the point of view and interests of the community or customers (Kubicek & Hagen, 2001).

Ginting, et al. (2018) describes the pattern of one-stop service as a type of service that has a process linkage and is served through one door. This type of service can be done more quickly and efficiently, because it can be processed in parallel, administratively and technically held on one roof and one door.

METHODS OF RESEARCH

In this study, researchers used descriptive qualitative approach that usually is used to answer the question "how" and "why", which in principles is to find detailed answers through in-depth interview (Hamidi 2010:11). With this qualitative research method, researchers hope to be able to describe the process of policy implementation regarding OSS and to find the factors that influence the implementation of OSS in the Integrated Licensing Service Office of Brebes Regency. In this study, to select informants, researchers refer to a combination of

purposive and snowball sampling technique with the aim of obtaining objective data in accordance with the real condition in the field.

In selecting the informants, researchers tend to choose informants who are considered to know the most and can be trusted to be a steady source of data and know the problem as a whole. Furthermore, to get the expected amount and quality of data, the researchers used a combination of purposive and snowball sampling technique to capture informants from the apparatus of Integrated Licensing Service Office of Brebes Regency who are directly involved with licensing service and aware of the problems that is investigated. After the interview is considered sufficiently appropriate, the key informants will appoint other informants who are seen to know more about the problem. In this study, researchers determined the head of Integrated Licensing Service Office of Brebes Regency as key informants. In addition to the key informants, researchers also determined supporting informants such as structural officers and officers/staff Sections of Integrated Licensing Service Office of Brebes Regency, members of the licensing technical team from the related office, and applicants for licensing service at Integrated Licensing Service Office of Brebes Regency.

The data required for this study is collected through several techniques, namely:

1. In-depth Interview;
2. Observation;
3. Documentation;
4. Literature Study.

In this study, researchers used data analysis interactive analysis model. The data analysis process using an interactive analysis model includes data collection, data reduction, data presentation, and drawing conclusions with the aim to understand the observed phenomena and answer the problems that have been formulated.

RESULTS AND DISCUSSION

One-Stop Service (OSS) Policy was first regulated in the Minister of Home Affairs Regulation No. 24 of 2006 concerning Guidelines for Implementing One-Stop Services. The implementation of the policy was then strengthened by several rules, namely Minister of Home Affairs Regulation No. 20 of 2008 concerning Organization Guidelines and Work Procedures for Integrated Licensing Service Units in Regions, Law No. 25 of 2009 concerning Public Services, and Presidential Regulation No. 97 of 2014 concerning Implementation of One-Stop Services.

OSS is one of the public service models that seek to respond to complaints of community dissatisfaction, because with OSS obtaining permits can be done only in one office. Therefore, applicants do not need to spend a lot of money, time, and effort to complete the permit.

The implementation of OSS in Brebes Regency is carried out by Integrated Licensing Service Office of Brebes Regency which was formed based on the Regional Regulation of Brebes Regency No. 7 of 2008 concerning Organization and Work Procedure of Regional Technical Institutions, Inspectorates, Civil Service Police Units and Other Institutions of Brebes Regency, with principal to coordinate and administer licensing administrative services in an integrated manner with the principles of coordination, integration, synchronization, simplicity, security, and certainty.

The initial observation from researchers shows that there is no consistency in regional apparatus organization as the organizers of OSS in Brebes Regency, which is still in the form of office, while the guidelines stated that it must be in the form of Regency/City One Stop Investment and Integration Service. Based on the Government Regulation No. 18 of 2016 concerning Regional Working Unit Organization, it also should be in the form of official service. In addition, there is no integration between investment activities and licensing service activities, since the investment issues is handled by the Regional Development Planning Agency while the licensing services are carried by the OSS.

The implementation of OSS by the Integrated Licensing Service Office of Brebes Regency is still done in the form of office, but in carrying out its main tasks and functions, it is already in accordance with OSS principle, such as integration proven by being the only licensing service starting from the application, processing, up to licensing that is carried out through one door at the Integrated Licensing Service Office of Brebes Regency.

However, in this study, researchers still found some requirements for recommendation in the technical office for several permits that made it more difficult for applicants and extend the process of obtaining permits, although the recommendations is considered as a complete requirement. In the practice, the applicant must go to two places: technical office to arrange recommendations, and then the OSS to continue the licensing process.

The Integrated Licensing Service Office of Brebes Regency has service standards for providing licensing services as determined based on the Decree of the Head of the Integrated Licensing Service Office of Brebes Regency No. 068.2/740 of 2012 on November 30, 2012. The service standard of the office was determined before the issuance of Presidential Regulation No. 97 of 2014. It means that there are no changes or adjustment to the new rules as well as in terms of requirements and service products that have been made since the enactment of the Presidential Regulation until the time this research was conducted.

In carrying out its duties, the Integrated Licensing Service Office of Brebes Regency has some constraints, namely the small budget for field inspection activities, limited personnel/employees, limited operational vehicles for field checks, and vary distance between subdistricts. If the entire permit application is carried out in a field inspection, it will result in the length of the permit settlement process. However, if the location inspection is not carried out, it will conflict with the rules and it can lead to problems in the future because of lack of support with the complete field data.

Based on the data of the period of permit completion, it can be seen that the fastest completion time is 1 working day while the longest is 12 working days. In fact, the Presidential Regulation No. 97 of 2014 stated that the OSS service period is set to no later than 7 working days. Based on the data of the Information System of the Integrated Licensing Service Office of Brebes Regency from January to November of 2016, the number of licenses issued was 5.669 permits. From the number issued, there are 1.018 licenses whose permit completion time exceeds a predetermined period of time, or 17.96% of the licenses issued exceed the period of completion of the permit.

Furthermore, the distance between subdistricts and the Integrated Licensing Service Office of Brebes Regency becomes another problem in the implementation of OSS. In order to administer permits, people who lived in the southern region must travel tens of kilometers, which also requires costs and travel time.

The implementation of OSS is required to use Electronic Services in accordance with Article 17 of Presidential Regulation No. 97 of 2014 which includes the automation of work processes (business processes) and information needed in Licensing and Non-Licensing services. The implementation of OSS through Electronic Services is considered not ready to be implemented by the researchers due to the lack of readiness from the OSS providers at the regional level who will manage and ensure that the Electronic Services operate continuously according to service level standards, data and information security, as well as the absence of implementation provisions through the Ministry of Home Affairs Regulation.

In this study, to find out the factors that influence the implementation of the policy, researchers use policy implementation model according to George C. Edward III who stated that there are 4 variables that influence the success of policy implementation, namely communication, resources, disposition, and bureaucratic structure.

In communication, there three important things, which are: transmission, consistency, and clarity. The OSS policy have been going on since 2006, and until today, the policy has been socialized by the central government to regional government through various forms of activities, such as socialization, National OSS Forum, and Provincial OSS Forum which are held regularly, as well as through OSS Technical Guidance held by the Ministry of Home Affairs, and OSS Investment Guidance held by the Investment Coordination Board.

In general, the communication of OSS service from the central government, which in this case is the Ministry of Home Affairs and the Investment Coordination Board to the Government of Brebes Regency, has been going well. In terms of transmission, the guidelines or instructions for OSS both based on Minister of Home Affairs Regulation No. 24 of 2006 and Presidential Regulation No. 97 of 2014 can be understood and implemented by the apparatus in Brebes Regency. It can be seen by the ongoing operation of OSS in Brebes Regency from 2006 to this time.

In terms of consistency, the OSS policy does not conflict with other rules, and it even supports the success of public service policies. This can be seen from what becomes the goal of OSS, such as shortening the service process, realizing services that are fast, easy, inexpensive, transparent, certain, and affordable.

On the other hand, the socialization carried out by the Integrated Licensing Service Office of Brebes Regency to the community is considered ineffective due to budget constraints. In fact, the socialization can be done every year in each subdistrict by inviting participants from villages in the sub districts. It would even be better if the socialization is carried out at the village, so that it could reach all business actors or communities who needed licensing information. The discussion of the transmission, consistency, and clarity proves that communication is very necessary and important in implementing a policy.

In the implementation of the policy, even though the point of the policy has been communicated clearly and consistently, if the implementers experience lack of resources to implement the policy, the implementation will not be able to run effectively. Important sources can include adequate and competent staff, authority, information, and supporting facilities.

Based on the data of number of employees in the Integrated Licensing Service Office of Brebes Regency and interview results, researchers observed that the composition of 60% civil servants employees and 40% of contract workers employees would certainly hinder the implementation of the OSS. From the total number of the employees, there are only 10 people who have undergraduate and diploma education qualifications, but they also cannot guarantee that they have competencies that are in accordance with their main tasks and functions. The shortage number of the employee is also known from the results of the workload analysis carried out by Integrated Licensing Service Office of Brebes Regency in 2016 which showed a shortage of staff.

The second resource required in the implementation of the policy is authority. Although in Brebes Regency the OSS implementation is only carried out by the office, in the practice, the Regent of Brebes had carried out delegation of almost all of the licensing authority to the Head of Integrated Licensing Service Office of Brebes Regency which is stated in the Regulations of Brebes Regent No. 005 of 2016.

The next resource related to the implementation of the policy is facilities. Facilities in the form of equipment and supplies are used to support work in implementing a policy. From the researchers' observation, the Integrated Licensing Service Office of Brebes Regency already has service rooms/counters, except that in its implementation for payment and submission of documents is provided in one place and served by only one staff members. The same thing also happens for the complaints handling site that becomes one place with the place of submission request and information due to limited staff. Besides that, there are still some shortcomings that could hamper the implementation of the service, such as lack of operational service vehicles used for field checks, and printers that often experience problems due to high activity in printing permit documents. Another obstacle is that the office building facility that is inadequate for vehicles parking.

Another important resource is budget support. From the interview result with some of the informants, it can be concluded that there are still limited budgets owned by the Integrated Licensing Service Office of Brebes Regency, especially for official travel budget checks, socialization activities, and licensing monitoring. From the description above, it can be stated that the existence of resources is something that is important in the implementation of policies, because without adequate resources, the implementation would not be able to run well.

The third variable from the implementation of the policy is disposition or attitude of the apparatus. In the Integrated Licensing Service Office of Brebes Regency, the front office officers have been able to carry out their duties properly. It is also supported by the information from permit applicants who stated that the service officer has been able to provide an explanation of licensing properly and has provided service kindly. In applying for permission applications, the applicants were directly served by the officer. The good attitudes of service officers are also proven by the results of the Community Satisfactory Index of Integrated Licensing Service Office of Brebes Regency in Semester 2 of 2016 to applicants for licensing. The result shows that, in general, the service quality for licensing units at Integrated Licensing Service Office of Brebes Regency is perceived well by the user community.

The last variable is bureaucracy with two main characteristics, namely: Standard Operating Procedure (SOP) and fragmentation. The Integrated Licensing Service Office of Brebes Regency already has an SOP as written in the Service Standards of Integrated Licensing Service Office. However, as discussed earlier, the Service Standards that is established in 2012 is old and there is no change or adjustment that has been made to the new legislation. Thus, it can be stated that the SOP is incompatible with current conditions, and adjustments need to be done immediately.

As for fragmentation, the worst consequence of bureaucratic fragmentation is that the implementers with the reason of different scale of program priority from different bodies encourage avoiding coordination with other agencies.

With the issuance of Presidential Regulation No. 97 of 2014, the organization structure of the Integrated Licensing Service Office of Brebes Regency should be adjusted to become Regency/City One-Stop Services and Investment Service. In its development, with the issuance of Government Regulation No. 18 of 2016 concerning Regional Work Unit, the organizational structure of OSS organizers underwent changes into the Investment Office and One Stop Service (OSS). The OSS administrators at the Regency/City Government level should be in echelon II position in form of an official service office in accordance with what is written in the Government Regulation No. 18 of 2016. It needs to be done to facilitate coordination with other technical agencies because in carrying out their duties they need the role from other technical institutions. This also added by the existence of the Licensing Technical Team residing in each technical agency and did not settle at the Integrated Licensing Service Office of Brebes Regency. This will lead to fragmentation of the organizational structure that will tend to difficult the coordination, so that the existence of the technical team needs to be reviewed or improved in terms of regulations at the central government level and with coordination in implementing tasks at the local government level, for example by permanently placing the Technical Team at the Integrated Licensing Service Office of Brebes Regency.

CONCLUSION AND RECOMMENDATIONS

The implementation of OSS in Brebes Regency which has been implemented since 2006 can be said to be ineffective since some of the practices include: several types of licenses that process in technical services office, there is no integration with investment activities, and there are several types of license that is processed for more than 7 working days, and licensing completion exceed the permit completion time.

The implementation of OSS in Integrated Licensing Service Office of Brebes Regency is influenced by the factors as follows:

a. Communication. The OSS policy has been communicated by the central government to regional government. However, there are unclear instructions about Electronic Services and the socialization that should be done by the Integrated Licensing Service Office of Brebes Regency has not been maximized due to budget constraints.

b. Resource. The Integrated Licensing Service Office of Brebes Regency has limitations in terms of staff, facilities, and a very minimal budget for field inspection,

socialization, and licensing monitoring activities. However, the authority has received delegation of almost all of the licensing authority from the Regent of Brebes.

c. Disposition. The attitude of service officers in general is good and friendly, although the employees do not have incentives in the form of special allowances.

d. Bureaucratic Structure. The organization of OSS is still in the form of office, while according to the Government Regulation No. 18 of 2016 it should be in the form of official service office. The Integrated Licensing Service Office of Brebes Regency already has an SOP contained in the Service Standards, but it is incompatible with current conditions. In addition, coordination with technical agencies and the existence of the Licensing Technical Team still become the obstacles in the implementation of licensing services.

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RELATIONSHIP BETWEEN CONSUMER RESPONSE AND SCIENCE AND TECHNOLOGY IMPLEMENTATION AT HIJAB SMEs IN GRESIK

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ABSTRACT

To increase its potential, hijab SMEs in Gresik have carried out various efforts, one of which is by implementing science and technology in their business activities. Although it has not been carried out perfectly, the results of implementing science and technology have significantly improved Hijab SMEs. The success in business can be seen from how consumer response to Hijab SMEs products. This study is exploratory research using a qualitative approach. The subjects were consumers from seven Hijab SMEs in Gresik with a research focus on how consumers respond to products produced by Hijab SMEs. Data were collected using questionnaires and observations to determine consumer responses of the Hijab SMEs products. Data were analyzed using Miles and Huberman techniques with four criteria attached, namely: Poor, Adequate, Good, and Very Good. The results indicate that the consumer response has increased especially after the Hijab SMEs implemented science and technology. Significantly, this study can also be a reference for studies on SMEs especially regarding the economic state and its development.

KEY WORDS

Consumer response, Hijab SMEs, science, technology.

Resource Dependence Theory is a theory that links organizational resources with their external resources. Pfeffer & Salancik (1978) explained how to ensure the survival of an organization by minimizing the situation of uncertainty and dependence and the characteristics of an organization as an open system, depending on contingencies in the external environment (Dalke, 2015). This dependence encourages business organizations to carry out strategies for external cooperation [(Thompson; 1967) (Thompson & McEwen; 1958)] or conduct inter-organizational relationships (Pfeffer & Salancik, 1978). Hijab SMEs in Gresik have carried out various forms of cooperation synergy in both internal and external production. Although it has high potential, the efforts to develop the hijab industries in Gresik are less than optimal due to some organizational weaknesses in the ownership of business resources. Business resources generally include tangible resources and intangible resources (Ismail, et. al, 2012). The Head of Diskoperindagkop of Gresik (2014) mentioned that problems occur in Hijab SMEs in Gresik mainly due to the less optimal of product qualities (hijab stitching). Another problem faced was a market decline due to the dense competition and the design quality of fashionable hijab.

Perception is a process by which people choose, regulate, and interpret sensations, namely the direct response of sensory receptors (such as the eyes, ears, nose, mouth, and fingers) to basic stimuli such as light, color, smell, texture, and sound (Madichie, 2012). The study of perceptions focuses on what we add to the basic sensations in interpreting the

stimuli received. Each individual interprets the meaning of stimulus to be consistent with their individual biases, needs, and personal experiences. There are three stages in interpreting stimulus (stimulation), namely exposure, attention, and interpretation to form the perception process. Perception will greatly influence how an individual responds to things perceived. If the perception is good, the response shows definitely good as well; in contrary, when it gives bad vibes, the response will be severe. One of the biggest problems faced by most companies is the quality of product images to the public. Several studies conducted related to this problem, one of which is the study of consumer perceptions of cars produced domestically or abroad. To create a good consumer perception, American car makers design not only good products that refer to consumer demand based on their likes and dislikes, but also advertisements that persuade consumers to choose products. Consumer perception, on the other hand, is described as acting and reacting to what someone sees (Kotler et al. 1998, p. 187). In bringing together two concepts, it can be said here that - advertising is the driving force (Akaka & Alden, 2010), which is responsible for shaping consumer perceptions and encouraging behavioral responses (Jones et al., 2010).

The concept of Efficient Consumer Response (ECR) was introduced in 1992 as a result of competition from alternative store formats that highlighted large inefficiencies in the supermarket industry and its supply chain (Bhutta, Huq, & Maubourguet, 2002). A study conducted on customer response shows that fast and accurate information flow through the supply chain enables suppliers and distributors to anticipate demand requirements that are far more accurate than the current system (Salmon Associates, Inc., 1993).

LITERATURE REVIEW

This study is based on empirical evidence on how consumer responses are influenced by the results of the implementation of science and technology carried out by the business actors, especially SMEs. A number of empirical studies involved with advertising mentioned two theories that generally appear in relation to consumer perceptions are cognitive theory and effective theory [(Park & McClung, 1985) (Park & Young, 1986) (Gyo-Lee & Thorson, 2009)]. Cognitive involvement refers to reactions related to thoughts generated by stimuli (Blackwell, Miniard & Engel, 2001) while effective involvement consists of feelings and arousal caused by stimuli (Dubé, Cervellon, & Jingyuan 2003; Yoo & MacInnis, 2005). Ahuvia (2005) suggests that the relationship of an individual with any object (consumption) can involve feelings of positive effects, as well as identification. The implication for the research of Gresik UKM hijab is that in the future the SMEs, especially Hijab SMEs, are expected to increase the level of product sales after SME players obtain product evaluation information provided by consumers to improve products in accordance with information about consumers' perceptions of hijab. This study is a series of previous studies conducted by the research team (Surjanti et al.) and it also reinforced the basis of the proposal for studies and research in the Hijab SMEs in Gresik.

Consumer response is positive or negative feedback received by a company for its products, services, or business ethics. Consumer responses can be in term of purchasing decision or reviews to products produced or offered by the company. According to Pluzinski & Qualls (1986), there are three traits that affect relationships in consumer responses including 1) iterations, 2) parallelism, and 3) complementarity. These three correspond and become theoretical limits for the relationship between effects, cognition, and conation. Consumer response cannot be separated from consumer perception and behavior, because both of these concerns how individuals make decisions on how to spend their resources (money, time, emotional involvement, etc.) to buy a product. According to Călin (2015), consumer response referring to their behavior and perception considers several dimensions, such as: what to buy (product), where to buy (location), and how often purchases are used (functions).

Hijab industry in Gresik is an industry based on local wisdom. Local wisdom is local potential such as natural, human, technological, and cultural resources [(Hariyadi, 2010) (Vanclay, 2011) (Aditiawati et al., 2016)]. In addition, local wisdom can also be interpreted as

knowledge gained from experience, life views, knowledge, and life strategies and derived from ancestors (previous generation) [(Alfian, 2013) (Akhmar & Syarifudin, 2007) (Phongphit & Nantasuwana, 2002) (Kongprasertamon, 2007)]. Local wisdom in Gresik as "The City of Santri" (Rosidin, 2015) has a close relationship with the development of local industries in the area. It is evident in HR as how UKM Hijab craftsmen in Gresik work to hold the values of Islamic life, choose the type of business, and sewing skills that were passed down by previous generations. Hijab SMEs in Gresik has special characteristics compared to other SMEs, namely how they act more as distributors who collect the results of hijab craftsmen and sell them to consumers rather than acting as direct producers and sellers. This situation has a significant effect on weaknesses and advantages. Because SMEs will depend on small business units (craftsmen), the resulting products will have varying qualities in accordance with the capabilities of their respective craftsmen. This will be a significant obstacle to improving product quality because supervision and quality control are quite difficult to do. On the other hand, with a business model like this (as a distributor/collector) this business will form a unit of business which will help to improve the community's economy together. This condition will bring SMEs to an important role in the management of hijab business resources in Gresik Regency. This UKM has a large multiplier effect for the sustainability of the livelihoods of the surrounding population.

Habraken (1976) explained that the transformation process occurs 1) slowly (little by little), 2) unpredictably (when it starts and when it will end because it depends on the factors that influence it), 3) comprehensively and sustainably, and 4) subjectively (relating to the value system or emotion that exists in the community) (in Pakilaran, 2006). Implementing science and technology at work means utilizing science and technology such as knowledge, information, invention, technique, etc. to carry out the work specialization. According to Kamrowska-zaluska & Soltys (2016), the work specialization process can be done through presenting the methods and results of the process, analyzing the evolution of the field of specialization; as well as identifying problems and challenges that occur during the process.

Furthermore, the implementation of science and technology in the industry means the changing process of knowledge and techniques in establishing and implementing existing cooperation. Collaboration can increase productivity as proved by Garcia, López-lópez, & Acevedo-Triana (2016). They found that collaboration between researchers in Latin America possibly increased productivity in journal publications and the level of scientific knowledge of Latin American researchers. By this point, implementing science and technology in the cooperation strategy of the Hijab SMEs in Gresik is very possible to increase productivity (hijab) both quantity and quality especially if the Hijab SMEs consider consumer responses as a basis for creating in business policy.

METHODS OF RESEARCH

This study is a qualitative study using Mile & Huberman technique on consumers of seven Hijab SMEs located in Banyuwangi Village, Manyar Sido Rukun Village, and Manyar Rejo Village. Each Hijab SMEs is a distributor who distributes production from ± 30 craftsmen. Data were collected through questionnaires and observations. Furthermore, the data was formulated based on four variables of production, marketing, productivity, and networking. Mapping is carried out by providing criteria for size Poor (P), Adequate (A), Good (G) and Very Good (VG).

RESULTS AND DISCUSSION

Respondents were Hijab SMEs in Gresik who implemented science and technology. From the initial observation (data obtained from Diskopum Gresik), there are 8 SMEs with high potential to implement science and technology. From those eight, researchers conducted an initial selection to look for SMEs that implemented science and technology in their business activities and obtained seven SMEs for these criteria (see Table 1). This study then conducted a survey through questionnaires and interviews with the SMEs on how

consumers responded after implementing science and technology on their business activities. In addition, researchers also conducted surveys to find out how their response.

Table 1 – Respondents of Hijab SMEs in Gresik

No.	Name	Sex	Address	Labors		
				F	M	Total
1	ALIFATUL HIDAYAH	P	Desa Banyuwangi	±20	0	20
2	ANIS MUAFIAH (ANNISA)	P	Jl. Margojoyo RT: 11/04 Banyuwangi	±20	0	20
3	MARYATI	P	Desa Gumeno Kampung Rambli RT: 13/05 Manyar	5	0	5
4	SRI RESTUNI/Fahmi Collection	P	Lebaksari Bungah Gresik	25	0	25
5	Hj. ROICHAN	P	sungonlegowo rt:002 rw:01, Bunga	±20	0	20
6	KHAMIMAH	P	Jl. Wahidin Sudiro Husodo XIII C/5 RT: 04/RW 05 Singorejo, Kebomas Gresik	7	0	7
7	IZZAH	P	Desa Banyuwangi	±30	0	30

Source: Data analysis.

The formulations are processed in the format of tables of potential and weaknesses, then separated in the potential table for four variables. The potential table is decrypted and is classified as Poor (P), Adequate (A), Good (G) and Very Good (VG) (see Table 2).

Table 2 – SMEs Potential on science and technology transformation

Production	21 indicators criteria: 16 - 21 : VG 11 - 15 : G 6 - 10 : A 1 - 5 : P	10 A	16 VG	12 G	14 G	13 G	13 G	17 G	Conclusion: R2 and R7 show best performance in production
Marketing	4 indicators criteria: 4 : VG 3 : G 2 : A 1 : P	2 A	4 VG	2 A	4 VG	4 VG	4 VG	4 VG	Conclusion: R1 and R3 show good performances in marketing, while others show adequately
Productivity	17 indicators criteria: 13 – 17: VG 9 – 12 : G 5 – 8 : A - 4 : P	6 A	6 A	5 A	7 A	6 A	9 G	14 VG	Conclusion: Only R7 has the best performance in productivity, others are only categorized good
Networking	9 indicators criteria: 7 - 9 : VG 5 - 6 : G 3 – 4 : A ... - 2 : P	4 A	4 A	3 A	3 A	5 G	4 A	5 G	Conclusion: R5 and R7 has good performance, while others only show adequately in networking; this is mainly due to insignificant results obtained according to the respopndent

From data, conclusions are drawn on how consumer responses affect the SMEs potential. Table 2 shows that there are SMEs who still have weaknesses in implementing science and technology. However, R7 has implemented science and technology on the four variables almost comprehensively (averagely Very Good), on the contrary, R1 has done them less comprehensive (averagely Adequate).

Based on market analysis, several aspects that affect consumers' responses of SMEs' products are business locations, technology use in business activities, marketing activities, and business networks. From the business location, R2, R4, and R7 arranged the business location and store layout which are convenient for customers. This decision affects the

selling points because customers prefer comfortable and easy to access place before buying products. The technology implementation in industrial activities is carried out by procuring production machinery (from design to packaging), surveillance cameras, and computers or the internet for marketing and expansion of industrial networks. In designing products, technology is employed as well (all R stated that they have made, developed, and introduced designs that use machinery or technological devices). These activities affect the quality of the products and, off course, lead to consumers satisfaction. Camera surveillance help to control quality in the production process because it ensures the stability of the production process. However, of the seven respondents, only R7 implemented science and technology by using surveillance (CCTV) during the production process and quality control from procuring raw materials, during processes, until the final product.

In the marketing, all respondents rely on consumer responses before carrying out the production process, so almost all Hijab SME products only respond to customer demand for production, yet R7 not only responds to consumers demand but also observes the market. From these, it is clearly seen that Hijab SMEs in Gresik only depend on existing customers; they mostly experience difficulties in business development because new prospective customers do not always have the same tastes as the existing ones. In addition, the management budget (implementing a comprehensive production calculation model including marketing costs (advertising), production costs, and maintenance costs (after-sales service)) is only performed by R7, while other respondents only consider production costs without considering marketing as well as after-sales service costs. After-sales services greatly influence the decisions of consumers in buying products (product purchases). This is due to the security felt after making a purchase because if the purchased product does not meet with their wishes or if there is any damage, they could request for product replacement/return. Without budgeting, especially those involving marketing and after-sales services, Hijab SMEs tend to experience difficulties or losses when products are not sold. This risk has become a significant problem and has caused the hinder in the development of the Hijab SMEs in Gresik.

The last variable of the science and technology implementation in this study is networking. From the analysis, it was found that Hijab SMEs in Gresik did not carry out this activity (developing industrial networks) so the SMEs only had consumers limited to certain environments. This condition resulting in consumers outside the SMEs area does not know (yet) on the products produced by those Hijab SMEs in Gresik. This greatly influences the income of SMEs because the target consumers will be limited. In addition, when outside consumers do not have information on product produced by the Hijab SMEs, they will be reluctant to purchase them. By implementing science and technology, the Hijab SMEs possibly increased their sales output (SME income). For examples, during observation, the researchers found that the Hijab SMEs averagely got revenues IDR 120 million/month (R5 and R6) because both SMEs only adequately implement the science and technology in their industrial activities. While other SMEs (R1, R2, R3, & R4) got revenues IDR 300 million/months due to their well-implemented science and technology. The highest revenue was obtained by R7 which reached IDR 392 million/month due to her best implementation of science and technology compared to other SMEs. This income clearly illustrates how consumer responses to products produced by SMEs who implemented science and technology in their industrial activities.

CONCLUSION AND RECOMMENDATIONS

Seven respondents (R1-R7) of the Hijab SMEs Gresik have implemented the science and technology, yet only R7 who implement them accordingly. However, there are areas where science and technology have not been best-implemented. Thus, it can be the basis for determining science and technology implementation policy in further research.

Consumer response, in this study, can be used as a benchmark for implementing science and technology implementation in Hijab SMEs.

The better the consumer's response is, the higher the possibility of SMEs implements science and technology as a whole.

It is recommended that respondents (R1-R7) to carry out comprehensive implementation on science and technology, especially R1-R6, while R7 is expected to increase the application of science and technology transformation and become a driver for other SMEs in the vicinity.

As implementing science and technology influences consumer response, it is expected that the Hijab SMEs actors to implement science and technology at whole.

Moreover, consumer responses can be used as a reference in improving the quality of the implementation of science and technology of Hijab SMEs so the progress and development of UKM Hijab can be achieved at the end.

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THE EFFECT OF SOCIO-CULTURAL FACTORS ON POLITICAL PARTICIPATION OF RURAL COMMUNITIES IN INDONESIA

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ABSTRACT

The purpose of this study was to analyze the influence of socio-cultural factors on the political participation of rural communities. The study was conducted in Ende District, East Nusa Tenggara. This study used qualitative methods with a case study approach. Data collection was done through observation, interviews, and documentation. The results of the study revealed that there were four social actions in political participation, namely instrumental rational, value-oriented rational, affective action, and traditional actions. There were five forms of political participation carried out by the community in the election, namely participation in exercising voting rights, participating in campaigns, participation in election committees, participation in inviting other parties and participation in the vote counting process.

KEY WORDS

Political participation, socio-cultural communities, public service, government.

Indonesia is a country that adheres to the notion of democracy. As a democratic country, the task of government involves the community in the implementation and enforcement of political decisions. Democratic parties in the form of general elections and choosing leaders still continue to run today (Knight K, 2002). The government also implements the Election of Regional Heads which provide opportunities for local people to elect their regional heads. The role of the community in determining policy and controlling government requires awareness and active political participation from the community. Political participation as an ordinary citizen activity influences the process of making and implementing public policy and participating in determining government leaders (Rahman 2002).

Political participation as an effort by citizens of the community both individually and in groups to participate in influencing the formation of public policy in a country (Gaffar 1998). Voter participation in Indonesia since the 1999 election until the 2014 election has fluctuated. In the legislative elections, a decline of voter participation of around 10% consistently occurred until the 2009 election. Meanwhile, in the 2014 election, the participation rate rose by 5%. In the presidential election case, it was noted that in the 2014 elections for the first time in history the participation rate was lower than the legislative elections. Political participation is also very dependent on mission, program and ideology conformity (Henneberg, 2004).

Political participation is interpreted by developing issues such as economic, social, foreign influence, support, and leadership characteristics (Falkowski, 2002). The ability to communicate with voters or potential voters can increase people's political participation (Niffenegger 1989). Political parties and political figures always try to influence people's attitudes in making political choices. This can increase political participation. The motives of the social actions that underlie the community in participating in politics are different. Every community has a motive in making political participation. Differences in motives for political participation in society are often influenced by education, employment, and social strata. This difference in motives underlies various forms of political participation in general elections. The purpose of this study was to analyze the influence of socio-cultural factors on the political participation of rural communities.

METHODS OF RESEARCH

This research was conducted in Ende District, East Nusa Tenggara, Indonesia. This study uses qualitative methods with a case study approach. This research was conducted from 2018-2019. The data used in this study are primary data and secondary data. Primary data is data obtained by researchers through observation, and in-depth interviews with respondents and informants directly at the study site. Observations were carried out by researchers by observing the physical condition and activities found at the study site. Analysis of qualitative data is carried out through four stages, namely data collection, data reduction, data presentation, and conclusion drawing. Qualitative research is carried out to complement data related to the motives of the political participation of the people in elections, forms of community political participation in elections, and the relationship between social actions and other forms of political participation in elections.

RESULTS AND DISCUSSION

Community Social Active Motives in Political Participation. In general, the socio-cultural factors of society are very influential on political culture and the level of political participation. Political culture in frequent sociological studies just emerging and coloring the current political contest, especially in rural communities. The socio-political process that takes place in the life of the Nuanaga village community is very closely related to the socio-cultural interactions that are created. Most socio-cultural factors have influenced the political participation of the people of the village of Nuanaga, Ende District. Thus, in the conduct of elections the village community produced different participation. The difference in participation is very much related to references and social actions.

In rural communities, elections are the motive for basic actions that influence political participation. According to Weber (2000), social action is divided into four types, namely actions with instrumental rational motives, actions with rational motives oriented to values, affective actions, and traditional actions. The motive for growing social actions in the Nuanaga village community makes a difference in political participation. The different motives of actions in political participation include: First, the motives of instrumental rational social actions, the motives of instrumental rational social actions are the motives of social actions based on rationality, consideration, and purpose.

In the Nuanaga village community, political participation is based on economic considerations in carrying out a social action. Political participation by the Nuanaga village community is based on economic achievements. According to Conway (1985: 20), in a society, the level of political participation tends to vary with socio-economic status. Those with higher education, earning more and having higher employment status are usually more participatory than those who are poor, uneducated and have low-status jobs. Second, rational motives are value-oriented, some of the Nuanaga villagers follow political participation based on certain social values in society. The social values are in the form of community awareness and the obligation of the leader based on the values adopted. Value-oriented rational motives are based on people's attitudes about the importance of getting the right leader. Most people have a high level of rational motive oriented tendency towards political participation in general election activities. Third, affective motives. Affective motives form the basis of the Nuanaga village community for political participation. Some people make elections based on emotional feelings and interests.

The affective motives possessed by the Nuanaga villagers in the election are related to the community's interest in participating in elections, the emotional closeness between the community and the candidates in elections, and the conduciveness of the social conditions of the community. The reason for this political participation tends to be non-national. When attending a general election, such as the election of a president, regional head or village head, it is not uncommon for people to be involved for affective emotional reasons. Fourth, traditional motifs. Traditional motives form the basis for some of the Nuanaga villagers to participate in political participation. Participation carried out by the community is based on

people's adherence to traditions and customs. Traditional motifs are tied to the choice of religious teachings, customs, the suitability of background, the ethnicity of candidates, figures and institutions that influence in culture.

Political Participation of the Nuanaga Village Community. Higher political participation indicates that the community follows and understands and engages in state activities. Likewise, vice versa, low political participation indicates that the community is less interested in state activities. The form of political participation of the Nuanaga Village community in the Election of Regional Heads and General Elections can be divided into five forms. The five forms include the use of suffrage, involvement in campaigns, community involvement in voting, participation in inviting others, and participation in vote counting. First, participation uses voting rights. The people of Nuanaga Village participate by using voting rights.

The community is given the right to choose the candidate leaders. Automatically, this election is also a means of political participation that requires the community to be involved in it. According to Ediraras et al. (2013), the use of voting rights is expected to support various policies, and certain programs carried by candidates. Second, campaign political participation. Some of the Nuanaga villagers participated in the campaign. The community spends its time, energy, or mind to be involved in the campaign. Campaigns carried out by the community vary, from social media promotions and coming to voters from home. Zachry (2009) said the model of conventional political campaigns had been replaced by social media presence. Ediraras et al. , (2013), said the election campaign was determined by the strategies applied by the candidates and parties to reach the voter target. Third, political participation in the form of voting. Some of the Nuanaga villagers participated in the voting. The form of voting participation by becoming the committee for the conduct of elections. the organizing committee for elections at the village level is divided into two categories, namely the Voting Committee (PPS) and the Voting Organizing Group (KPPS).

The Voting Committee (PPS) is an election committee at the village level. Members of the Voting Committee consisted of one village official and several community members who were trusted by the village elite to become the Voting Committee. People who are members of the Voting Committee are those who are selected based on the results of deliberations between village officials. Fourth, political participation in inviting other parties. The Nuanaga Village community partially participates in inviting others to participate in elections, such as reminding the community to exercise their right to vote, being involved in campaigns, participating as election committees, and participating in the voting process. Fifth, political participation in the form of vote counting.

The Nuanaga Village community involved in the vote counting process felt the need to know and witness who the candidates were elected. Although information about the candidates selected in the election can be known from the surrounding neighbors. some people feel the need to take part in a vote-counting process to witness the process of electing candidates. The reality is that the Nuanaga villagers live with political ambitions. This phenomenon can be seen in the lives of middle-class people who have the complexity of ambitions from economic and political aspects and often end in conflicts of interest. Conflict of interest often ends with disappointment because interests do not match the desired expectations. This kind of thing will create conflict within the group so that it has an impact on social ties.

CONCLUSION

There are factors that influence the political participation of rural communities in the village of Nuanaga. This factor is seen in the form of social action. The results of the study found four motives of social action in political participation, namely instrumental rational, value-oriented, affective, and traditional rationales. The results of the study also revealed that there were five forms of political participation carried out by the public in general elections, namely participation in voting rights, participating in campaigns, election committees, inviting others to participate, and participating in the vote counting process.

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**DETERMINATION OF STUDENT DECISION FACTORS
IN CHOOSING STUDY PROGRAMS IN THE FACULTY OF PUBLIC HEALTH
AT ANDALAS UNIVERSITY, INDONESIA**

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ABSTRACT

Selection of study programs for students requires several considerations before making a decision in determining the place of study. This study aims to identify the student's decision to choose a study program at the Faculty of Public Health Unand, analyze the factors that influence the student's decision to choose a study program at the Faculty of Public Health Andalas University, and formulate managerial implications related to strategies to increase the number of applicants and those who apply to Unand FKM. This study was conducted on students of Public Health and Nutrition Sciences in 2017 and 2018 who actively carry out lectures with a total sample of 391. The variables of this study are product, people, process, promotion, physical evidence, campus image and employment. The data collection method uses a questionnaire with a Likert scale, analyzed using SEM. The results showed that the factors of product, process and promotion had a significant direct influence on the decision of students to choose a study program at the Faculty of Public Health Unand.

KEY WORDS

Partial least square, campus image, employment, marketing mix, decision to choose, study program.

Fulfilling education needs in Indonesia is one of the nation's goals set out in Law Number 12 of 2012, concerning higher education. Higher education as part of the national education system has a strategic role in educating the nation's life and advancing science and technology by paying attention to and applying the values of humanities and the empowerment of a sustainable nation of Indonesia. The selection of study programs for students requires several considerations before making a decision in determining the place of study later. Engel et al. (1995) states that consumer decisions in choosing products / services are influenced by three things: 1. Internal environment / individual consists of consumer resources (time, money, and attention), motivation and involvement, knowledge, attitude, personality, lifestyle and demography; 2. The external environment consists of cultural factors, social class, personal, family and situation influences; and 3. Psychology consists of information processing, learning, attitude and behavior changes.

There are six important factors when choosing a study program, namely factors related to family / parents, peers, school of origin, individual personality, campus image and employment prospects (Saputro 2017). Opinions from the family and individual interests are the main factors in choosing a place to study (Yamamoto 2006). Product, price, promotion, place, people, process and physical evidence have an influence on the decisions of students choosing the MIPA UNMUL Faculty of Computer Science majors (Merni 2011). Institutional

images and future work have a significant influence on students choosing to study at the University of Taiwan (Yao-Chuan Tsai (2017)). A good image of an organization is an asset that has an impact on consumer perceptions can be seen from the organization's communication and operations in various ways, this has an influence on the decision to choose an accounting department (Risnawati 2012), followed by interest factors, shared decision factors, and the availability of employment opportunities for accounting graduates.

The development of the world of education in Indonesia, there are many public universities and private universities that open public health faculties, including STIKES which also establishes public health science and nutrition science study programs that make competition even higher. The faculty and study program must strive to improve the quality and provide the best education for recipients of services, namely students. Students applying for and being accepted at the Unand Faculty of Public Health experienced quite volatile changes from 2016 to 2018. The ratio of the number of applicants and the number received in 2016 was: 1: 30.55, in 2017 amounting to 1: 24.21 and in 2018 is 1: 29.17. This means that student tightness / competition chooses FKM is quite high. This must be improved to get quality students, to produce quality and useful graduates in the labor market. Based on the above problems this study takes the title of the determinants of student decisions in choosing a study program at the Faculty of Public Health Unand.

This study aims to identify the student's decision to choose a study program at the Faculty of Public Health Unand, analyze the factors that influence student decisions to choose a study program at the Faculty of Public Health Unand, and formulate recommendations for strategies to increase the number of applicants and those who apply to Unand FKM.

LITERATURE REVIEW

According to Kotler (2009) and Engel et al. (1995) decision making on purchasing products / services is influenced by several factors, namely:

1. Cultural Factors. Culture is a value, thought and symbol that influences a person's behavior, attitudes, beliefs and habits;
2. Social Factors. Consumer behavior is influenced by social factors such as reference groups, families and the role and status of consumers;
3. Personal Factors. Personal factors are individual habits that are influenced by the closest environment in making choices, and then expressed in an action (Purimahua 2005);
4. Psychological factors. Psychological factors are encouragement from someone who influences the selection of something based on the flexibility of the product used, greater desire and ease of use of the product compared to others.

Marshall and Jhonston (2010) state that the marketing of traditional marketing mix concepts consists of 7 P, namely:

- Product. Product services are all things that can be offered by producers to be considered, requested, sought, bought, used or consumed by the market as meeting the needs or desires of the relevant market;
- Price. Price is the amount of money customers pay for a particular product;
- Place. Location is a place where services are provided. Location determination includes consideration of how to deliver services to customers where services must be placed;
- Promotion. Promotion is an activity carried out by a company or organization to communicate and promote its products to the target market;
- People. People are an important element in producing and delivering services;
- Physical evidence. Physical Evidence is the physical environment in which services are delivered, and there is an interaction between service providers and consumers;
- Process. Process is a procedure, mechanism, and series of service delivery activities. Service marketing is carried out because services have different characteristics from

products, namely: intangibility, inseparability, variability and perishability. Service marketing is different from product marketing.

The image of higher education as defined by Kotler and Fox (1995) are images, impressions and beliefs that a person has towards an object and object in the form of an organization. The good image given by an organization has become an asset because the image itself is the impact of consumer perceptions that come from communication and operations of the organization in various fields.

The determinants of students in choosing study programs are factor product, people, process, promotion, physical evidence of campus image and employment. Following are the results of previous research studies based on these factors:

1. Product Factors. Choosing a study program for students requires some consideration before making a decision. According to Rodic et al. (2016) the product has a positive influence on students' decisions to choose faculties at University Novi Sad, Serbia. This study uses the interview method with a questionnaire. The sample is students in six faculties at this university with 783 students as respondents. This is reinforced by Handayani (2017) who conducted research on marketing mix analysis of students' decision to choose study programs. The results of his research show that the product has a significant and positive effect on the decision to choose students. This study uses the interview method with a questionnaire. The sample is a student at the Faculty of Economics, University of Bojonegoro with a number of respondents of 100 students. The main objective of students choosing study programs is to obtain products / knowledge that are in accordance with their needs and desires, so that students can be said to enter the product in the form of knowledge they need (Merni 2011).

2. People Factor. The application of better marketing mix elements, especially people, has a significant influence on students' decisions to choose study programs at Covenant University Nigeria (Ogunnaike 2014). The sample is a student of the Business Management Department with 226 students. People's variables in the research conducted by Merni (2011) state that lecturers and administrative staff play an important role in the decision of students to choose majors in higher education. The sample is a student of the Department of Computer Science, Faculty of Mipa Unmul with 195 students. Raharjo et al. (2015) and Fosu at al (2017) identify that people have a positive influence on the decision of students to choose a place to study. The decision to choose a place to study becomes an important thing because it involves the future for the students themselves.

3. Process Factors. Muhyidin (2014) states that process variables have a significant influence on the decision of students to choose a place of study. This study uses descriptive quantitative methods and questionnaires. The sample is new students in 15 PTS in West Java who actively study in the odd semester of the 2013/2014 academic year with a total of 341 students. The process in education services greatly determines the quality of a college graduate. Similar results were found in the Suryani et al. (2013) that the process variable significantly influences the decision of students to choose the place of birth. Ogunnaike (2014), Kurniawati (2013), Handayani (2017) and Raharjo et al. (2016) identifying process variables have a significant influence on students' decision to choose a place of study.

4. Promotion factor. Promotion factor is a way that makes it easier to convey information related to education services. Osman (2013) found that promotion had a positive and significant influence on students' decision to choose study programs at Malaysian Universities. The sample is all middle school students with 373 students. Samat et al. (2017) in his research stated that promotion variables have a significant influence on student decisions in choosing a place to study. The sample is students who study in five universities in Palembang City with a total of 110 students. Ade (2016) states that promotion variables in the marketing mix have a significant influence on the decision of students to choose majors in higher education.

5. Physical evidence factor. Suryani et al. (2013) examined the factors that influence students' decisions in choosing departments in the faculty. His research found that evidence physical variables influence the decision of students to choose a place to study. The sample is students of the Faculty of Economics, Islamic University of North Sumatra, Al Munawaroh,

2009 to 2012 with a sample of 460 students. Ogunnaike (2014), Merni (2011), Handayani (2017), Raharjo et al. (2016) and Ade (2016) found the same results of research that physical evidence had a significant effect on students' decisions to study.

6. Campus Image Factors. Campus image has a big role in influencing decision making for students. Yao-Chuan Tsai (2017) states that institutional images have a significant influence on students choosing to study at Taiwan University. This study uses the method of direct interview and questionnaire. The sample is international students studying in Taiwan with 210 students as respondents. The results of this study are reinforced by Fakhri at al (2017) and Saputro (2017), who concluded that there was a significant effect of campus image on the decision of students to choose a place to study. This indicates that even though students do not know the product or brand of a campus, students can choose through the image of the campus.

7. Factors of Employment. Employment is one of the main concerns for students in determining the place of study. The results obtained from Risnawati's research (2012) is that there is a significant influence on the employment prospects of the decision to choose students. The sample is a student of accounting major in 2011 STIE Perbanas Surabaya with 435 students. Yao-Chuan Tsai (2017) future work has a significant influence on students choosing to study at Taiwan University. Likewise, the results of research conducted by Saputro (2007) state that employment has a positive effect on student decisions in choosing a place to study. The sample is a student of the 2015/2016 and 2016/2017 Academic Year Program with a total sample of all students in the academic year.

RESEARCH HYPOTHESIS

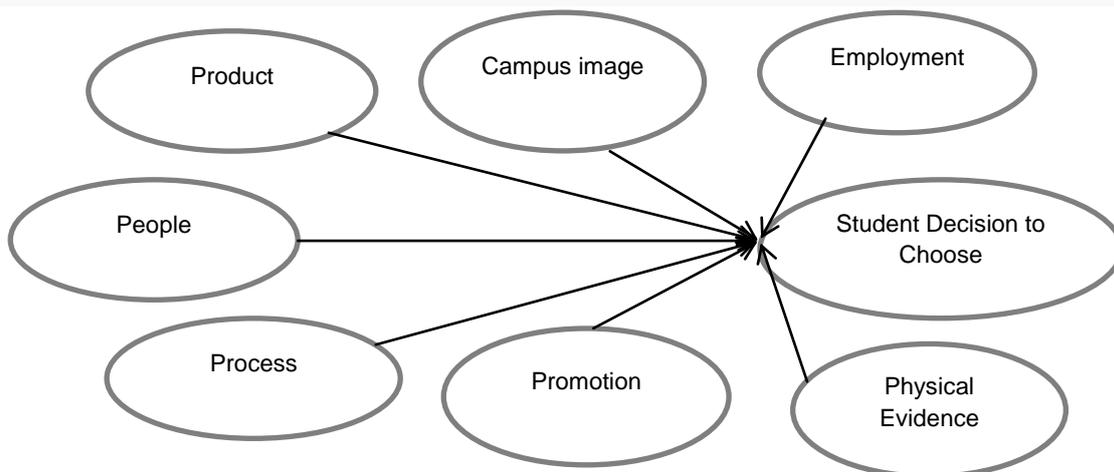


Figure 1 – Framework for thinking

This study consists of 7 hypotheses, namely H1: Product has a significant effect on the decision to choose a study program, H2: People has a significant effect on the decision to choose a study program, H3: Process has a significant effect on the decision to choose a study program, H5: Physical evidence has a significant effect on the decision to choose a study program, H6: Campus image has a significant effect on the decision to choose a study program, and H7: Employment has a significant effect on the decision to choose a study program.

METHODS OF RESEARCH

The study was conducted at the Faculty of Public Health of Andalas University, with student research subjects in 2017 and 2018 who actively conducted lectures. Research data collection was conducted from February to March 2019. The sources and types of data used were primary data. Primary data used by researchers include product, people, process,

promotion, physical evidence, campus image and employment and student decisions to choose study programs. As for the sample of all S1 students who are actively studying at the Unand Faculty of Public Health in 2017 and 2018, there are 391 active students. The sampling technique is carried out by census or saturated samples. Saturated census or sample is a sampling technique if all members of the population are used as a sample (Sugiyono 2015). Data and information were collected by distributing closed questionnaires to respondents, filling out questionnaires conducted self-administered by being guided directly by researchers. This study used descriptive analysis with SPSS24 and SEM-PLS analysis.

RESULTS AND DISCUSSION

Decision Making Process. The results showed that the highest consideration in choosing the Unand Faculty of Public Health was the 60% offered and 13% reputation offered. With this situation, FKM Unand must improve its existence, especially related to the field of science offered and reputation. Rudhumbu (2017) also found that study programs and locations were the highest factors in choosing universities in Botswana.

The most widely used source of information is through mass media (websites, brochures, newspapers) with a percentage of 28%, a nuclear family of 19% and teachers (teachers in schools, at tutoring places) of 19%. This shows that respondents are easier to get information about FKM Unand, especially through mass media, nuclear families and teachers. Osman (2013) in his research also found that students choosing institutions were mainly promoted through radio and television in Malaysia.

The giver of influence in choosing the Unand Faculty of Public Health showed the highest results were obtained from the students' own interest of 61%, while the influence of the family (parents, siblings) was 18% and teachers (teachers in the school, teachers on the guidance place) were 7%. Family opinion and student interests are the most important factors that influence student choice (Yamamoto 2006).

Description of Variable Indicators. The results showed that the availability of expertise and skills in accordance with employment became an attraction for respondents in choosing FKM Unand study program, which amounted to 60.4%, while for science that was in accordance with needs / desires 57.3% and knowledge that made it easy to get a job after graduating 52.7%. More can be seen in Table 1. This illustrates that respondents really need expertise, skills and knowledge in accordance with their needs and desires to compete in the world of work. Merni (2011) also suggested that students enter the computer science department of F.MIPA UNMUL to obtain products / knowledge according to their needs and desires.

Respondents want competent lecturers in the field of science to be taught at 70.8% and administrative staff in providing good services to students by 33.2%. More can be seen in Table 1. The results of this Unand FKM need to improve the knowledge and skills of lecturers and administrative staff in order to produce qualified and competent graduates. Internal environmental factors including people are important for students in choosing majors at FEB Undiksha (Ayu 2014). Lecturers are an important factor in changing students' perceptions of an institution (Osman 2013).

In the process variables, more than 50% of students choose student activity indicators to increase the softskill, provide clear curriculum / syllabus / lecture methods and produce graduates on time, while indicators produce competent graduates with a short work waiting period of under 50%. More can be seen in Table 1. This shows tense when graduates get a job long enough, because the cooperation carried out by FKM with companies and hospitals has not been well established, as is the alumni network that has not been well organized. Muhyidin (2014) also argues that the better the process will affect the increasing decision of students to choose certain universities.

Promotional activities through dissemination to schools are the main choices of respondents, amounting to 39.4%, promotion via the internet / website by 30.9% and promotion through brochures / leaflets of 23.8%. More can be seen in Table 1. This shows

that promotions carried out through socialization to schools will quickly arrive or be accepted by prospective students. Likewise through the internet / website because the age range of 17-19 is very active in using the internet to obtain the information they need. Promoting school visits led by alumni from the school will be the main attraction for prospective students (Ivy 2008).

Indicators have a very complete media (infocus / sound system) teaching and learning being the highest indicator chosen by respondents at 60.3%, while indicators have very good IT facilities, have complete books in the library, have very good laboratory facilities complete and have a very adequate building below 60.3%. More can be seen in Table 1. This shows the supporting facilities for teaching and learning activities in Unand FKM are the availability of media (infocus and sound systems) and internet networks. For other facilities University facilities are used together. The completeness of the media and teaching and learning facilities in PTS is a benchmark for students in making a decision (Muhyidin 2014).

Having an accredited BAN-PT / LAM-PTKES status is the most important thing for respondents to choose a study program of 80.3%. For indicators of good quality / quality of education in higher education, having a proud academic achievement in higher education and an IKM / Nutrition study program is the favorite choice to be the next thing chosen by respondents. More can be seen in Table 1. This shows the accredited status of a campus is very necessary to get jobs for the respondents later. Risnawati (2012) also noted that the accredited status of study programs was the main thing for students at STIE Perbanas Surabaya.

Table 1 – Percentage of student assessment based on product indicators, people, process, promotion, physical evidence, campus image, and employment on student decisions to choose study programs

No	Indicator	TS	N	S
	<i>Indicator Product</i>			
1	Having knowledge in accordance with needs / desires	6,4	36,3	57,3
2	Expertise and skills in accordance with existing employment	2,8	36,8	60,4
3	Providing knowledge that makes it easy to get a job after graduation	4,6	42,7	52,7
	<i>Indicator People</i>			
4	Have competent lecturers.	4,4	24,8	70,8
5	Have administrative staff providing good service.	27,2	39,6	33,2
	<i>Indicator Process</i>			
6	Having student activities increases skill	2,0	22,3	75,7
7	Produce graduates on time	3,6	39,4	57,0
8	Providing curriculum / syllabus / lecture methods	10,0	28,1	61,9
9	Produce competent graduates	7,7	56,3	36,0
	<i>Indicator Promotion</i>			
10	Actively carry out promotions through brochures / leaflets	22,7	53,5	23,8
11	Online promotion through internet / website	16,6	52,4	30,9
12	Dissemination to schools	13,8	46,8	39,4
	<i>Indicator Physical evidence</i>			
13	Laboratory facilities	33,3	41,7	25,0
14	Have books in the library	18,7	43,2	38,1
15	Has a building (lecture room, practice room and prayer room)	44,5	31,2	24,3
16	Has media (In focus / sound system)	7,9	31,7	60,3
17	It has very good IT (internet) facilities	14,9	39,6	45,5
	<i>Indicator Campus Image</i>			
18	Have academic achievements (research and community service)	3,9	41,4	54,7
19	Have good quality / quality of education in college.	2,0	32,2	65,7
20	The Unand IKM / Nutrition study program is a favorite choice	10,0	46,5	43,4
21	Has an accredited BAN-PT / LAM-KES status	1,6	18,2	80,3
	<i>Indicator Employment</i>			
22	Alumni have the opportunity to work in a company / hospital	3,9	38,9	57,3
23	Graduates get jobs in accordance with the field of specialization	4,9	55,5	39,6
24	Graduates easily get jobs	6,9	56,0	37,0
	<i>Indicator Decision to Choose a Study Program</i>			
25	In accordance with the field of specialization	10,3	29,7	60,1
26	The ease of getting a job	9,5	46,8	43,7
27	Campus reputation	25,0	39,6	35,4
28	Invite friends / relatives / acquaintances	65,5	17,4	17,1

Description: TS = disagree; N = neutral; S = agree.

Alumni indicators have the highest chance to work in companies and hospitals having the highest score of 57%, compared to the other three indicators, namely indicators of getting jobs that are in accordance with the field of specialization and easy to find work both in hotels / offices / schools / consultants. More can be seen in Table 1. This shows that the employment opportunities obtained by graduates are not necessarily in accordance with the knowledge they have because currently the market share not only sees the knowledge they have mastered but also the skills they have. Job opportunities are important for students in Taiwan in choosing a place to study (Yao-Chuan Tsai 2017).

Decision to Choose a Study Program. In this case, the highest choice of respondents choosing study programs is because the desired specialization is 60.1%. Furthermore, the ease of getting a job, campus reputation and invitation from friends / relatives / acquaintances. More can be seen in Table 1. This explains that the respondents chose the study program because the field of specialization was desired. The field of knowledge desired or offered is an attraction for Bogor City Senior High Schools to choose IPB (Haryanti 2016, Solikhah 2016).

Analysis of Measurement Model Compatibility Test. Based on the convergent validity test, which is the correlation value between indicators and latent variables, the loading factor and AVE values of each indicator from a latent variable are more than 0.5, but there are two indicators with a loading factor of less than 0.5, the X5.5 indicator on the physical evidence variable and indicator Y4 on the decision decision variable, the indicator must be discarded and re-analyzed. The AVE analysis results obtained AVE values from the process variable indicator, X3.1, less than 0.5, this indicator must be discarded and re-analyzed. The results of confirmatory analysis after removing invalid indicators can be seen in Figure 2.

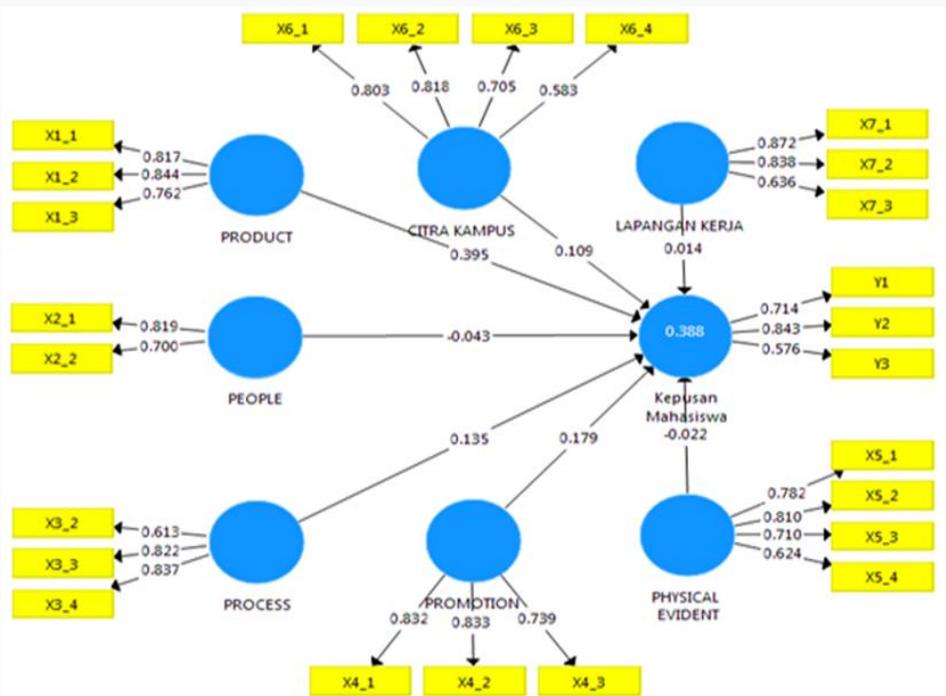


Figure 2 – SEM Results

For discriminant validity test, how far the difference in the value of the validity of a variable when compared with other variables, by comparing the value of the square root AVE and the value of correlation between verbs. Obtained AVE square root values of all variables and indicators greater than 0.7 and comparison of AVE root values greater than the correlation value between other variables. Likewise the cross loading value between variables with indicators is greater than the correlation value of other latent variables with the indicator variable. It can be interpreted that all latent variables in this study have good discriminant validity.

Composite reliability test to measure the consistency and accuracy of internal measuring instruments that have a standard value above 0.7. The reliability values of each latent variable, namely product, people, process, promotion, physical evidence, campus image, employment and student decisions have values above 0.7. Thus all latent variables have good composite reliability. The results of the processed data are complete in Table 2.

Table 2 – Value of research variable reliability

Variable	Composite reliability
Product	0,850
People	0,734
Prices	0,805
Promotion	0,844
Physical Evidence	0,823
Campus Image	0,821
Employment	0,829
Student decisions	0,759

Testing the hypothesis in this study can be seen from the magnitude of the critical value of the statistical t-test. The hypothesis is said to be significant at $t\text{-value} > 1.96$. Based on the results of hypothesis testing in Table 3, three variables were obtained which had a significant positive direct effect.

Table 3 – Hypothesis test results

Effects of Variable	T Statistics	Description
Campus image -> Student decisions	1,953	Not significant
Employment -> Student decision	0,286	Not significant
People -> Student decision	0,926	Not significant
Physical evidence-> Student decision	0,441	Not significant
Process-> Student decision	2,113	Significant
Product -> Student decision	7,386	Significant
Promotion -> Student decision	3,384	Significant

Based on data processing, it is known that the R^2 value of the student's decision to choose a study program at FKM Unand is 0.388, meaning that the latent variable decision to choose students can be explained by latent product variables, people, process, physical evidence, campus image and employment at 38.8%, the remainder is explained by other variables not examined in this study. These variables are price variables, place, interests, internal environment and external environment.

Product Effect on Choosing Decisions. The one hypothesis states that product has a significant effect on the decision to choose a study program. Based on Table 3, SEM results show the value of t count at 7.386. The value of t count is greater than the value of t table so that the product has a positive and significant effect on the decision to choose a study program. The results of this study are reinforced by previous studies conducted by Rodic et al. (2016) which states that there is a positive and significant relationship between the product and the decision to choose a study program in the faculty of the University of Novi Sad. Other research shows the same results conducted by Hestingtyas (2015), Merni (2011) which states that the products offered by universities have a positive and significant effect on the decision of students to choose study programs. Rahardjo et al (2015) concluded that there was a positive and significant influence between the products on student motivation in choosing the LP3I Banjarmasin Business College. This means that the knowledge and skills offered by universities are a consideration for students in deciding to choose a place to study.

Effects of People on Decisions to Choose. The second hypothesis states that people have a significant effect on the decision to choose a study program. Based on Table 3, SEM results show the value of t count is 0.926 smaller than the value of t table so that people have a negative effect and are not significant towards the decision to choose a study program. The results of this study are different from the results of the Ogunnaike study

(2014) which found that the application of marketing mix elements, especially people, had a significant influence on the students' decision to choose study programs at Covenant University Nigeria. Osman (2013), Raharjo et al. (2015), Handayani (2017), also has different results, where people have a positive and significant influence on the decision of students to choose a study program in college. The results of this study indicate that students are not too influential in the presence of a lecturer or educational staff in the education process. Currently lectures can be done through e-learning, where this is one factor of the student's decision.

Effect of Process on Decision to Choose. The third hypothesis states that the process has a significant effect on the decision to choose a study program. Based on Table 3, SEM results show a value of t count of 2.113. The value of t count is greater than the value of t table so that the product has a positive and significant effect on the decision to choose a study program. The results of this study are in line with the research conducted by Suryani et al. (2013), Kurniawati (2013) and Handayani (2017) which states that the process has a significant effect on the decision to choose students. Likewise the research conducted by Muhyidin (2014) states that the process has a significant effect on the decision of students to choose a place to study. The process in education services greatly determines the quality of a college graduate.

Effect of Promotion on Decision to Choose. The fourth hypothesis states that promotion has a significant effect on the decision to choose a study program. Based on Table 3, SEM results show the value of t count of 3.384. The value of t count is greater than the value of t table so that the product has a positive and significant effect on the decision to choose a study program. The results of this study are reinforced by previous research conducted by Osman (2013) which states that promotion has a positive and significant influence on the decision of students to choose study programs at universities in Malaysia. Rudhumbu (2017) and Ivy (2008) state that promotion strategies carried out by universities have a significant effect on students' decisions about university choices. Rahardjo et al (2015) found that there was a positive and significant influence between promotions on the motivation of students in choosing the LP3I Banjarmasin Business College.

Effect of Physical Evidence on Decision to Choose. The fifth hypothesis states that physical evidence has a significant effect on the decision to choose a stud program. Based on Table 3, SEM results show a value of t count of 0.441 smaller than the value of t table so that physical evidence has a negative effect and is not significant for the decision to choose a study program. The results of this study are not in line with the research conducted by Suryani et al. (2013) shows that physical evidence has a significant influence on the decision to choose students in the Faculty of Economics, Islamic University of North Sumatra Al Munawaroh. Ogunnaike (2014), Merni (2011), Handayani (2017) also found different results, where physical evidence had a significant effect on students' decisions to study. The results of this study indicate that students are not too concerned about buildings, libraries, laboratories because this can be done in a shared lecture hall provided by the university. The center of the laboratory and university library is adjacent to the faculty.

Effect of Campus Image on Decision to Choose. The sixth hypothesis states that the campus image has a significant effect on the decision to choose a study program. Based on Table 3, SEM results show a t value of 1.953 smaller than the value of t table so that the campus image has a positive and not significant effect on the decision to choose a study program. Several studies have different results from this study, namely research conducted by Saputro (2017) and Susilowati (2008) suggests that there is a significant effect of campus image on the decision of students to choose a place to study. The same research was also conducted by Risnawati (2012) who found that campus image had a significant effect on the decision to choose students at STIE Perbanas Surabaya. The brand image owned by IPB has an influence on the interest of students choosing IPB (Solikhah 2016). This is because FKM is part of a university that already has A accreditation, brand image and big name in the eyes of the public, making respondents no longer pay attention to the campus image in the faculty.

Influence of Employment on Decision to Choose. The seventh hypothesis states that employment has a significant effect on the decision to choose a study program. Based on Table 3, SEM results show the value of t count of 0.286 smaller than the value of t table so that employment has a positive and not significant effect on the decision to choose a study program. The results of this study are not in line with the research conducted by Yao-Chuan Tsai (2017) suggesting that future work has a significant influence on students choosing to study at Taiwan University. The same results were also found in Risnawati (2012) and Saputro (2007) employment opportunities that had a positive and significant effect on students' decisions in choosing a place to study.

Managerial Implications for Institutions:

1. The results of this study found that the product variable contributed the most to the students' decisions in choosing study programs at FKM Unand. For this reason, good and organized management must be carried out on study programs (IKM and Nutrition), so that the knowledge, skills and expertise possessed are able to compete and meet the needs of the labor market;
2. The health department is very popular with the community. To get information related to public health schools can get it through promotions carried out by the school. Variable promotion which influences students to choose study programs, through this, FKM Unand can promote excellence in the field of expertise possessed by IKM and Nutrition by involving various social media networks, with the aim of getting students who really have the basic knowledge and talent so that the quality of graduates will be better;
3. The educational process carried out by higher education determines the quality of graduates. The process of teaching and learning carried out by FKM Unand has been well seen from the graduates produced not much different when registering. Different and increasing results are needed for the quality of later graduates, such as creating a harmonious academic atmosphere between lecturers and students. Providing and explaining syllabus / method of lectures before the teaching and learning process begins to give direction to students. Alumni network strengthened and collaborated with hospitals and private companies in the health sector related to graduate placement.

CONCLUSION AND SUGGESTIONS

Students decide to choose a study program at FKM Unand because of the ease of getting a job, the field of specialization offered in accordance with their wants and needs and FKM has a good campus reputation. Product, process and promotion have the greatest influence on the decision to choose a study program at FKM Unand and show a positive and significant relationship with the decision to choose. People, physical evidence, campus image and employment have a positive, negative and not significant relationship to student decisions in choosing study programs at Unand FKM.

The need for an academic atmosphere to create an optimal teaching and learning process to achieve the mission of FKM Unand as a center for the development of public health human resources through the implementation of quality oriented education, competitiveness and character and professionalism. In making student decision making, it is also influenced by internal and external factors, while in this study it did not analyze the influence of these two factors, so for the next study to analyze the internal and external factors so that the influence of the decision to study program is known.

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DESTINATIONS' COMPETITIVENESS THROUGH TOURIST SATISFACTION: A SYSTEMATIC MAPPING STUDY

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ABSTRACT

The concept of tourism competitiveness is not only related to the economic sector but also directly related to social and cultural aspects. Tourism destinations have been developed at an industrial level, where destination management involves various aspects of the sector at domestic and international levels so that it needs to be studied more deeply for practitioners and academics. Therefore, this article aims to classify, identify scientific publications and conduct a systematic analysis of the current literature, to create extensive and detailed understanding. The research method is carried out with a systematic mapping study (SMS) technique to find research trends and look for the state of the art from the field of tourist satisfaction and destination competitiveness. The research method adopted by SMS is a practical research method to identify the right topics to be researched, and which areas are needed for more research by examining scientific publications produced based on the focus and type of research from time to time. The results of this study provide guidance to assist researchers in planning future research through the discovery of research gaps. This Systematic Mapping Study procedure follows relevant empirical guidelines and maps articles in Scopus's electronic database. Furthermore, the researchers examined all articles published in various international journals published by Scopus in the last 10 years. Articles are chosen according to the criteria of the relevant tourist satisfaction and destination competitiveness studies, the final findings of which are 54 articles that match the inclusion criteria. The author classifies articles in six categories, namely research trends from year to year, country of publication, type of article, research approach, research focus and research locus.

KEY WORDS

Systematic mapping study, research gaps tourism, destination competitiveness, tourist satisfaction, tourism, Indonesia.

Tourism is one of the largest and fastest growing industries in the world, this sector contributes greatly to economic development, poverty reduction, employment and various other positive impacts (economic, social, political and cultural) (Cooper & Hall, 2007; Vuuren & Slabbert, 2011). The vital role of the tourism sector requires all parties or stakeholders to develop this sector sustainably. In addition to the important role and positive impact produced by the tourism sector, if it is not managed with a sustainable principle, the tourism sector can harm local communities, the natural environment and the economy (Ratman, 2016).

The tourism system as an industry consists of a demand and supply subsystem. The aspect of travel deals is closely related to the activities of providing tourist attractions, tourism services such as guides, hotel facilities, restaurants, conditions and means of transportation to tourist attractions. These needs are the supply produced by producers and are a unitary entity that tourists must obtain together (Graham, Nilsen, & Payne, 1988). Thus it is said that tourism products are complex, component production is handled by various agencies both government and private, individuals and groups (Octavia et al., 2016).

The number of emerging destinations for regional, national and international scales makes tourism destinations have very tight competitors. Tourism competitiveness can be interpreted as the ability of tourist destinations to sell tourist facilities and tourism services

better than other destinations in tourism experiences that are considered important by tourists (Knežević Cvelbar, Dwyer, Koman, & Mihalič, 2016). Tourist satisfaction is very important for the competitiveness of a tourism destination because it will directly influence the choice of destinations, re-visit intention which ultimately results in loyalty (Yoon & Uysal, 2005; Agyeiwaah, Adongo, Dimache, & Wondirad, 2016; Sheng & Chen, 2012; Chen & Chen, 2010; Kotler & Keller, 2016).

The purpose of this systematic mapping study is to shape the background of further research and gain deeper insight into destination competitiveness. In the search, researchers used electronic databases to find articles that discussed destination competitiveness. SMS study is the right method as a literature study approach because it is supported by articles from searches in Scopus electronic database.

The research questions in this systematic mapping study are far broader than SLRs to discuss the broader scope of research (Barbara Kitchenham & Charters, 2007). The research questions from this study concentrate on categorizing topics related to destination competitiveness. Overall researchers analyzed the search results of article searches with the main questions (Research Questions) in this study include:

1. RQ1: How are the trends of publication of each year?
2. RQ2: How is the trend of the country publication of origin?
3. RQ3: How are the types of publication articles studied?
4. RQ4: How is the research approach carried out?
5. RQ5: How is the focus of the research on the topic studied?
6. RQ6: How is the research locus on the topic studied?

The results of this study provide a comprehensive research approach to destination competitiveness as well as implications and guidelines for academics and other practitioners.

LITERATURE REVIEW

Based on a search of several sources of research conducted, researchers found that the research to be carried out was adapted from a part of the model integrated with destination competitiveness consisting of inherited resources, resources created, supporting factors and other resources as determinants of competitiveness the destination to be done, The only difference is only the description terms used by researchers and other studies that also identify resource objectives as an important factor in determining competitiveness, as done by (Armenski, Dwyer, & Pavluković, 2018; Armenski, Gomezelj, Djurdjev, Čurčić, & Dragin, 2012; Ritchie & Crouch, 2003; Wilde & Cox, 2008; Larry Dwyer & Kim, 2003; L Dwyer, Livaic, & Mellor, 2003; Buhalis, 2000; Hassan, 2000; Kozak & Rimmington, 1999). In this case, it examines the factors that influence destination competitiveness from a tourist perspective (demand side).

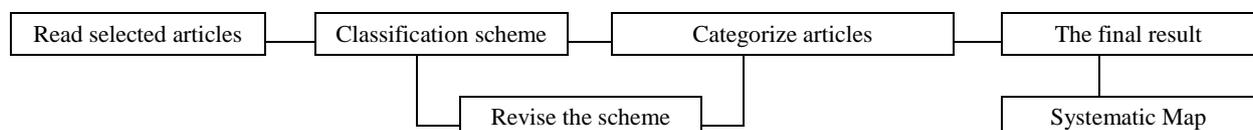


Figure 1 – Classification Process

Referring to the systematic literature review / SLR method (Barbara Kitchenham & Charters, 2007) literature reference sources are based on database journals spread in digital libraries such as; Scopus, Elsevier, MDPI, Wiley Online Library, SAGE Journals, ScienceDirect, Emerald Insight. Researchers choose publication articles that are relevant to the topic under study and categorize findings based on suggestions from (Banaeianjahromi & Smolander, 2014).

This study refers to research conducted and according to instructions by (Kitchenham, 2004; Petersen, Feldt, Mujtaba, & Mattsson, 2008; Banaeianjahromi & Smolander, 2016), every step of systematic mapping will have results up to the final results of mapping processes to determine research gaps.

In the systematic propagation process, to analyze and classify articles that have been selected based on criteria, researchers develop a classification scheme that refers to (Petersen et al., 2008). The process of classifying articles is illustrated in Figure 1.

METHODS OF RESEARCH

This study uses a systematic mapping study (SMS) method which is a secondary study. SMS is rooted in a study literature review (SLR) introduced in medical research (Barbara Kitchenham, 2004). The application of SLR is to identify, evaluate, and interpret all available and relevant literature related to research questions or domains of interest (Barbara Kitchenham & Charters, 2007)(Petersen et al., 2008). The most common reasons for conducting an SLR are: first, summarize the available evidence on the topic; Second, to identify gaps in current research and provide suggestions for future investigations; And third, to provide a background for positioning new research activities (Barbara Kitchenham, 2004; 2007; 2009; 2011; 2013).

SMS is applied to describe the types of research activities that have been carried out in this study. SMS describes research at a high level and maps research from investigating research questions in detail (Petersen et al., 2008). In other words, SMS can be considered as a method to get an overview of a particular area of research (B. Kitchenham et al., 2011), because, SMS research explores information in detail (Barbara Kitchenham & Brereton, 2013).

RESULTS AND DISCUSSION

This systematic mapping study provides an overall picture of destination competitiveness. Researchers from academia and practitioners can use this research as a reference for conducting research. The researcher examined all articles published in various international journals published by Scopus in the last 10 years. The first step is to define the main keywords, the second step is to examine studies that are well known in the field of destination competitiveness, and the third step is to look for alternative keywords to be used in the search process, the last step using Boolean operators whose function is to synthesize one search, using AND or OR. Articles are selected according to the field of tourist satisfaction and destination competitiveness with search criteria ("tourist satisfaction" AND ("destination competitiveness" OR destination OR competitiveness OR competitive)), the final findings of the relevant article search database using Scopus are 54 articles.

Table 1 – Results of Mapping Tourist Satisfaction and Destination Competitiveness

No	Category	Sub Categories	Number of Publications
1	2	3	4
1	Year	2008-2010	3
		2011-2013	11
		2014-2016	14
		2017-2018	24
2	Publication Country of Origin	Australia	1
		Bangladesh	1
		China	2
		Croatia	1
		Cyprus	1
		Denmark	1
		Dominican Republic	1
		Ecuador	2
		Egypt	1
		India	1
		Italy	1
		Japan	1
		Kuwait	1
		Malaysia	7
		Netherlands	2
New Zealand	1		
1	2	3	4
2	Publication Country of Origin	Portugal	4

		Romania	1
		Slovenia	1
		South Korea	4
		Spain	3
		Switzerland	1
		Taiwan	2
		Thailand	3
		Turkey	2
		United Kingdom	1
		United States	4
		Vietnam	1
		Zimbabwe	1
3	Research Focus	Attraction Experiences	1
		Behavioral Intentions	2
		Destination Competitiveness	4
		Destination Image	5
		Destination Loyalty	9
		Destination Attributes	3
		Destination Attributes Management	1
		Destination Branding	1
		Destination Development	1
		Destination Experience	1
		Destination Marketing	2
		Developmental Strategy Destinations	1
		Marketing Strategies of Destinations	1
		Revisit Intention	2
		Service Quality Destination	1
		Sustainability Tourism	1
		Sustainable Development Destinations	1
		Sustainable Tourist Destination	1
		Tourism Development	1
		Tourism Motivations	6
		Tourist Satisfaction	9
4	Research Locus	Spiritual Tourism	1
		Attract Chinese Tourists	1
		City's Tourism	10
		Community-Based Ecotourism (CBE)	1
		Country's Tourism Industry	1
		Culinary Destination	1
		Cultural Tourism	3
		Destination Management Organizations	1
		Destination Managers Marketing	1
		Ecotourism Product And Destination	1
		Education Tourism	2
		Food Souvenirs Bandung	1
		Halal Tourism	1
		Heritage Tourism Ecuador	1
		Hospitality Business Management	1
		Hotels And Customers	1
		Islamic Tourism	4
		Island Tourism	3
		Local Government And Businesses	1
		Mainland Chinese Outbound Tourists	1
		Major Tourism Destination	2
		Management of a Destination	2
		Management Strategies Destination	1
		Outbound Travelers	1
		Religious Tourists Travelling	1
		Romanian Tourists Generation Y	1
		Rural Tourism	2
		Service Consumption Tourist	1
		Small To Medium Tourism	1
		Tour Operators And Travel Agents	1
		Tourism Management Region	1
		Tourist Country	1
		Tourist Destination Managers	1
		Traditional Cultural Attractions	1
5	Paper Type	<i>Validation research</i>	23
		<i>Evaluation Research</i>	19
		<i>Solution Proposal</i>	0
		<i>Philosophical paper</i>	12
6	Research Approach	<i>Mixed-Methods</i>	2
		<i>Qualitative</i>	4
		<i>Quantitative</i>	48

RQ1: How are the trends of publication of each year?

Based on the results of the mapping study, it can be illustrated the trends in the study of tourist satisfaction and destination competitiveness from 2000 to 2018. The largest publication results were in 2018, 13 research later in 2017 as many as 11 studies, as shown in the following figure 2:

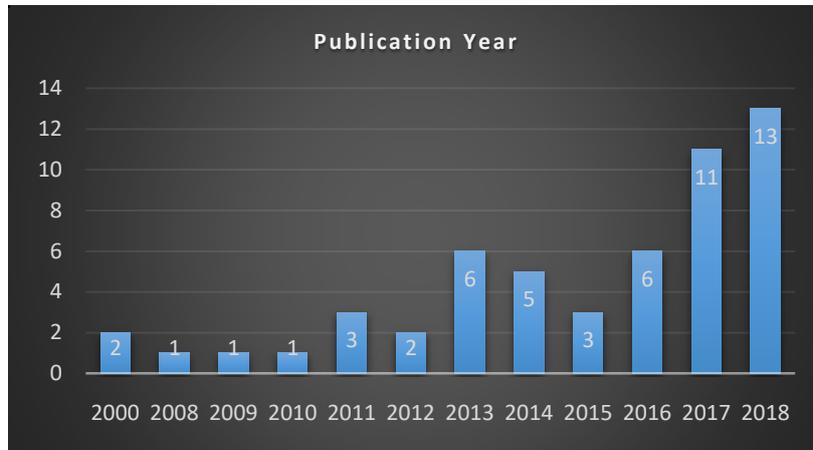


Figure 2 – Research Trends Each Year

RQ2: How is the trend of the country publication of origin?

The grouping of articles based on the state is known that the study of tourist satisfaction and destination competitiveness is generally dominated by 7 scientific articles from Malaysia, followed by Portugal, South Korea, and the United States each with 4 article publications. This condition shows that research on tourist satisfaction and destination competitiveness is a research theme that has received much attention from academics and practitioners in ASEAN with Malaysia representing the largest number of articles, whereas in Indonesia there has been no research on tourist satisfaction and destination competitiveness (Figure 3).

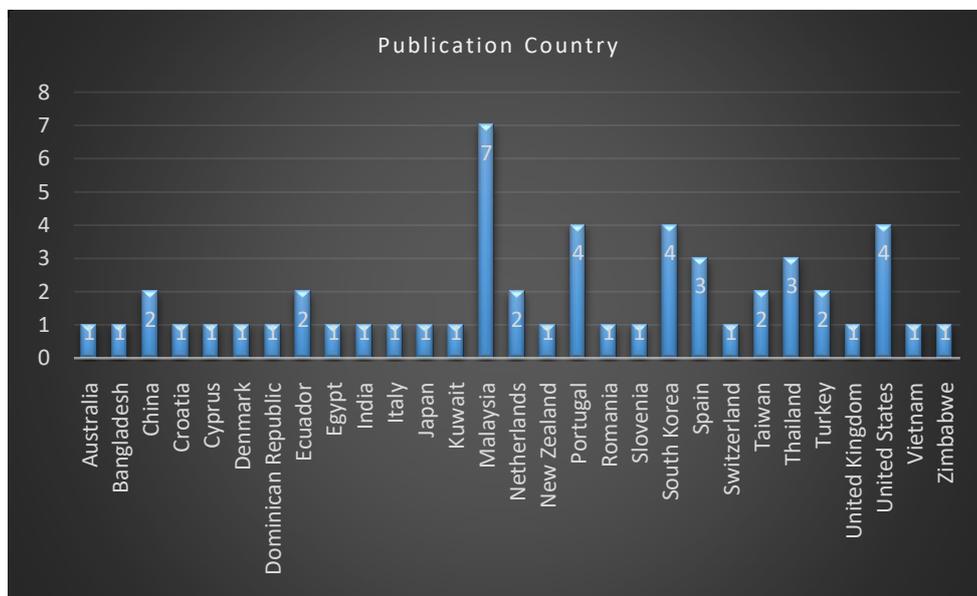


Figure 3 – Publication Country of Origin

RQ3: How are the types of publication articles studied?

Furthermore, the researcher's categorized previous research based on paper type. In figure 4 illustrates the number of types of articles in previous studies regarding tourist satisfaction and destination competitiveness. Based on the systematic mapping results, the

most frequently used types of articles are 23 article validation, then the 19 evaluation paper types, and 12 articles for philosophical papers, but articles have not been found with the type of solution paper article.

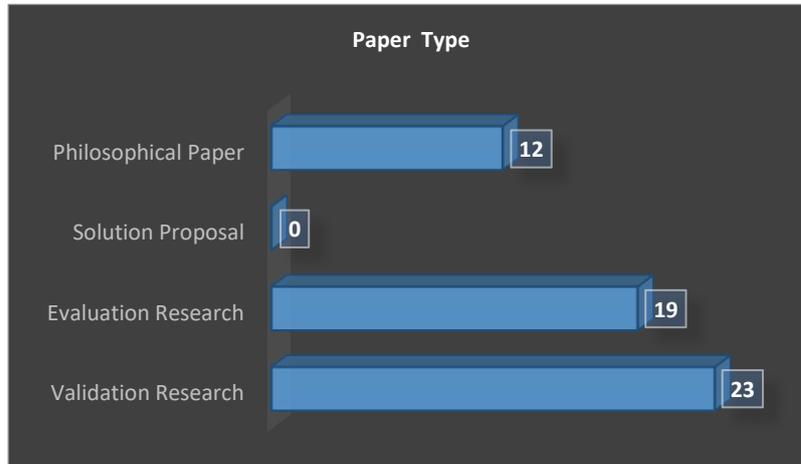


Figure 4 – Types of Articles

RQ4: How is the research approach carried out?

The approach of the research method used in this systematic mapping is quantitative, qualitative and mixed-method approaches. The research approach using quantitative methods is the most widely used method. The total articles that conduct research using a quantitative approach are 48 articles. Then followed by articles using 4 qualitative methods, and mixed methods as many as 2 studies. The total accumulation of findings from 54 articles from the Scopus reputable journal is explained in the following figure 5:

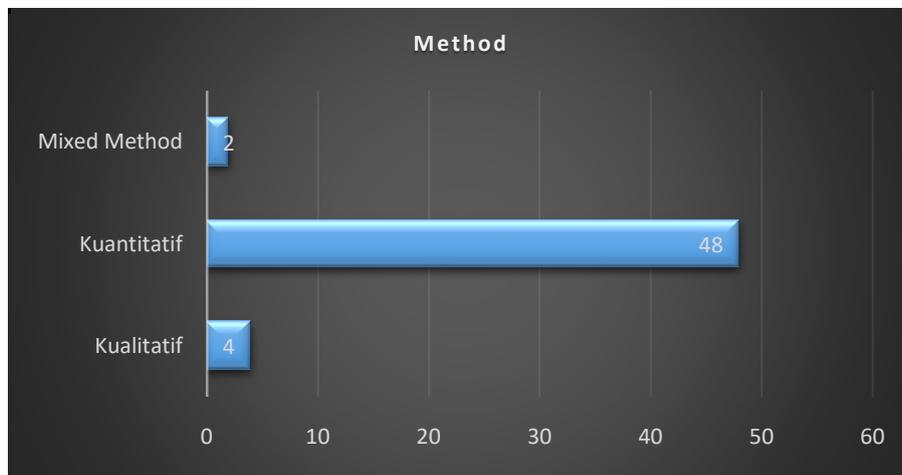


Figure 5 – Research Approach

RQ5: How is the focus of the research on the topic studied?

Grouping articles based on the focus of the research shows that the focus of previous research was on tourist satisfaction and destination competitiveness. Figure 6 shows that the most research focus is found in articles with a focus on research on tourist satisfaction and destination loyalty, each of 9 research articles, 6 research focus on tourist motivation, then destination image research focus of 5 articles and research on destination competitiveness as much as 4 research.

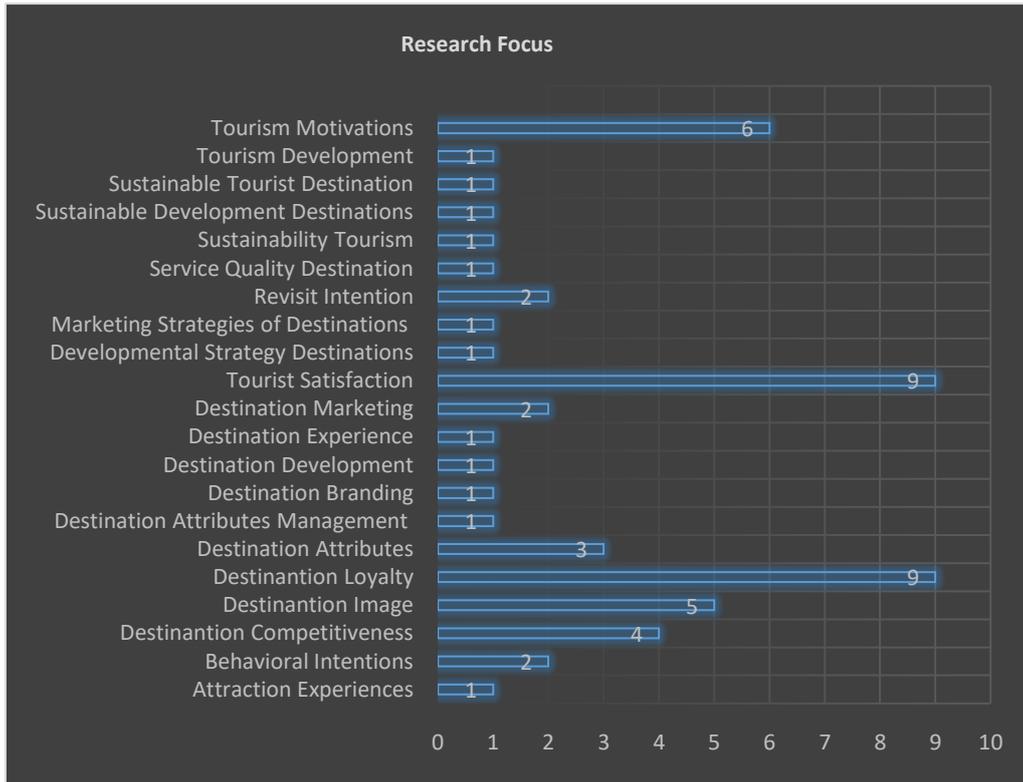


Figure 6 – Research Focus

RQ6: How is the research locus on the topic studied?

Grouping articles based on the research locus in Figure 7 shows that the research of tourist satisfaction and destination competitiveness has 10 articles researching city tourism, Islamic tourism has 4 articles, then cultural tourism and island tourism, each of which has 3 articles.

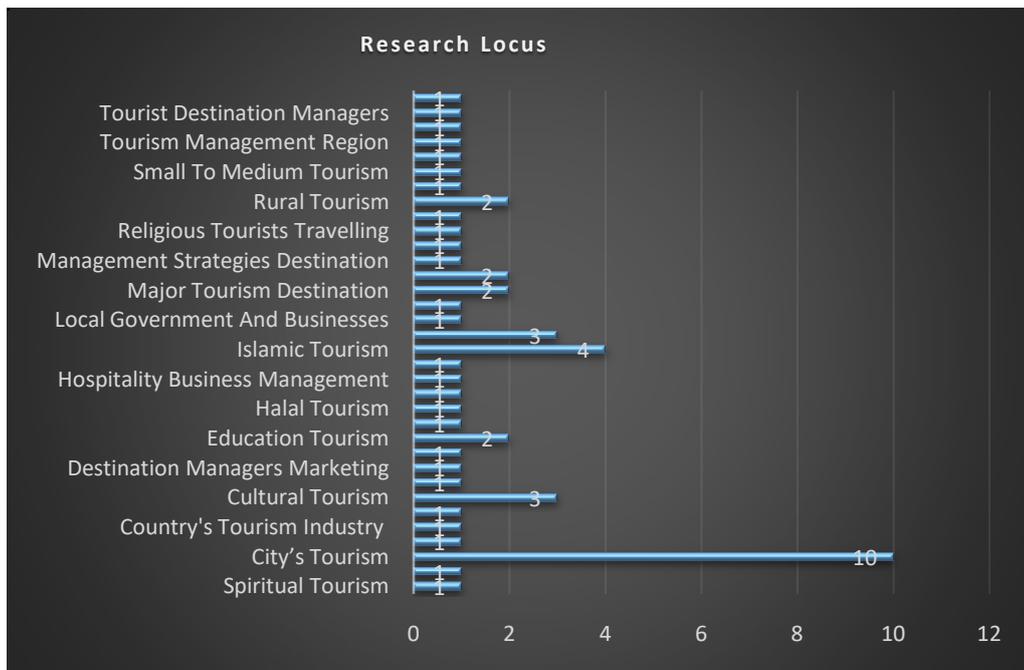


Figure 7 – Research Locus

CONCLUSION

The researcher conducted a literature mapping study of destination competitiveness systematically (a systematic literature review). The main motivation of the mapped study is to find research trends and look for the state of the art of tourist satisfaction and destination competitiveness. and as a consideration for academics and practitioners for reference and literature in the field of tourism competitiveness.

Researchers applied the SMS method carried out (B. A. Kitchenham, 2007; Petersen et al., 2008) to determine the focus of what has been studied in this area of research that has been systematically mapped, and then the authors classify it according to article categories such as previous research trends, publication country of origin, type of article, research approach, research method, research focus, and research locus. The research method adopted (SMS) is a practical research method to identify the right topics to study, and which areas are needed for more research. Furthermore, this SMS study will later become the initial reference for research in the field of destination competitiveness. The results of this study provide guidance to assist researchers in planning future research through the discovery of research gaps.

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THE EFFECT OF LOCAL GOVERNMENT OWN REVENUE AND REVENUE SHARING FUNDS ON ECONOMIC PERFORMANCE AND COMMUNITY WELFARE THROUGH CAPITAL EXPENDITURE OF REGENCY / CITY IN BALI PROVINCE, INDONESIA

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ABSTRACT

The consequence of implementing regional autonomy in Indonesia is the adequate financial capacity of regional governments to improve service to improve welfare for the community. The non-leveling of financial resources and regional economic potential causes an imbalance in the level of welfare between regions. The purpose of this study is to analyze: 1) the effect of local government own revenue and revenue sharing funds on capital expenditure, 2) the influence of local government own revenue, revenue sharing funds, and capital expenditure on economic performance, 3) the influence of local government own revenue, revenue sharing funds, capital expenditure, and economic performance on the community welfare, and 4) the effect of local government own revenue, revenue sharing funds on the community welfare through capital expenditure and economic performance of Regency / cities in Bali Province. This study uses secondary data in the form of panel data during the years 2010 - 2017 of Regency / cities in Bali Province. Data collected is data on Local Government Own Revenue (PAD), Revenue Sharing Funds (DBH), Capital Expenditures obtained from the Bali Provincial Finance Bureau, and data on per capital income and Human Development Index (HDI) obtained from the Provincial Statistics Agency (BPS) Office Bali. The data is then analyzed by path analysis using Partial Least Square (PLS) software. This study concludes that local revenue has a positive effect on capital expenditure, but revenue-sharing funds have no significant effect on regency / cities in Bali Province during 2010 - 2017. Local government owns revenue, revenue sharing and capital expenditure have a positive effect on economic performance. Local government owns revenue, revenue sharing funds, capital expenditure, and economic performance have a positive effect on the community welfare. Local government own revenue, revenue sharing funds affect the community welfare through capital expenditure and economic performance of Regency/cities in Bali Province. With the imbalance of the Community welfare in the Province of Bali, it is recommended that the central government increase the balance funds for regency/cities whose HDI is still low.

KEY WORDS

Regional local government own revenue, revenue sharing funds, capital expenditure, economic performance, community welfare.

The aim of implementing regional autonomy in Indonesia is administratively so that local governments in carrying out their duties and functions try to achieve efficient and effective and more responsible (Suwandi, 2000). With the government getting closer to the community, regional autonomy is expected to accelerate the improvement of the welfare of the people in the regency / cities. Community welfare in a region can be seen from the Human Development Index (HDI). Thus the region can improve the welfare of the community through increasing human development as reflected in the increasing Human Development Index (HDI).

HDI is a composite index to regulate the achievement of the quality of human development to live a better quality, both in terms of health, education and economics (Christy and Priyo Hari Adi, 2009). Health indicators are measured using life expectancy. Educational indicators are measured by literacy and school length variables which are assumed to be able to describe the ability of human resources to find and utilize knowledge

and technology. Economic indicators are approached by household expenditure variables as a proxy for household income to meet minimum living needs, while the quality of housing can describe the level of occupancy and welfare of the community. Achievement of HDI in Bali Province in 2010-2017 is presented in Figure 1.

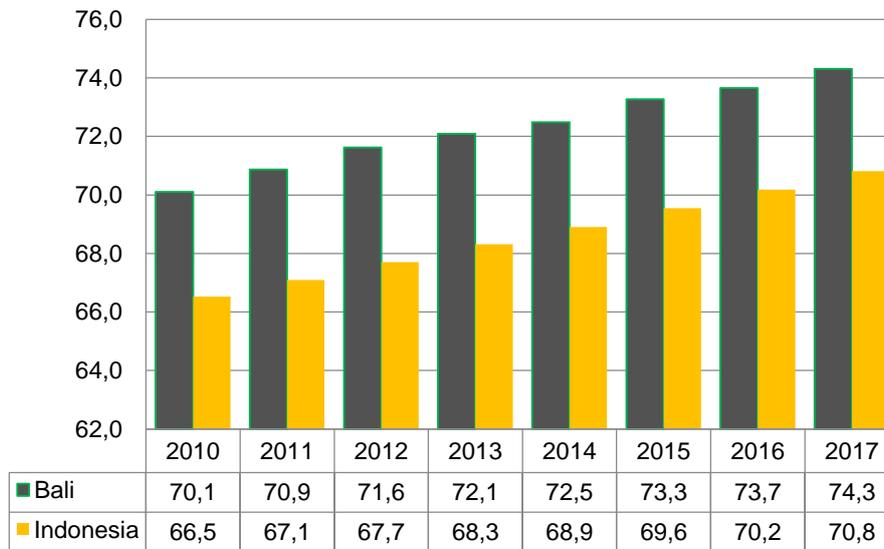


Figure 1 – Human Development Index (HDI) in the provinces of Bali and Indonesia, 2010-2017

Based on Figure 1 it can be seen that HDI in Bali Province is far above the national average, because from 2010 to 2017 Bali Province HDI is ranked fifth out of 34 provinces in Indonesia. As explained earlier HDI in Bali Province is above the national average. However, if viewed by regency / city, the HDI achievement shows inequality. As presented in Figure 2, the Sarbagita area (Denpasar, Badung, Gianyar, and Tabanan) has HDI achievement above the average of regencies / cities in Bali Province.

The difference in HDI between regency / cities is certainly caused by differences in the resources possessed by each region. The resources referred to include sources of development funds and good services obtained from the central government, as well as those obtained from the region itself and its allocation, as well as economic conditions. As it is known that HDI is measured based on the performance of education, health, and economy, then in the context of implementing regional autonomy this is closely related to the availability of government budgetary resources to support education, health and economic services. The greater the budget allocated for education, health and economic programs, the better the HDI in an area. As stated by Suwandi (2000) that the capacity of the Regional Government in carrying out functions such as implementing a public service function, carrying out a development function and implementing a protective function is regional financial capacity. The low financial capacity of the region will often lead to a negative effect cycle, namely the low level of service for the community making it difficult to improve their welfare. Besides being related to the budget, HDI is also related to the economic performance of a region.

In terms of regional expenditures that are directly related to improving community welfare and growing economic activities, capital expenditure is needed. According to Bastian (2006) capital expenditure is allocated for expenditures relating to the purchase of investment goods in the form of fixed assets and other assets, or certain facilities in order to provide services to the public directly or indirectly the benefits of the community. This capital expenditure is based on regional needs for infrastructure, both for the smooth implementation of government duties and for public facilities, such as equipment, buildings, infrastructure, such as education, health facilities, roads, bridges, irrigation facilities, and others. Because capital expenditure is very important for service to the community, improving

economic performance and public welfare, the central government requires regions to budget for Capital Expenditures of at least 20 percent of the total Regional Expenditure each year.

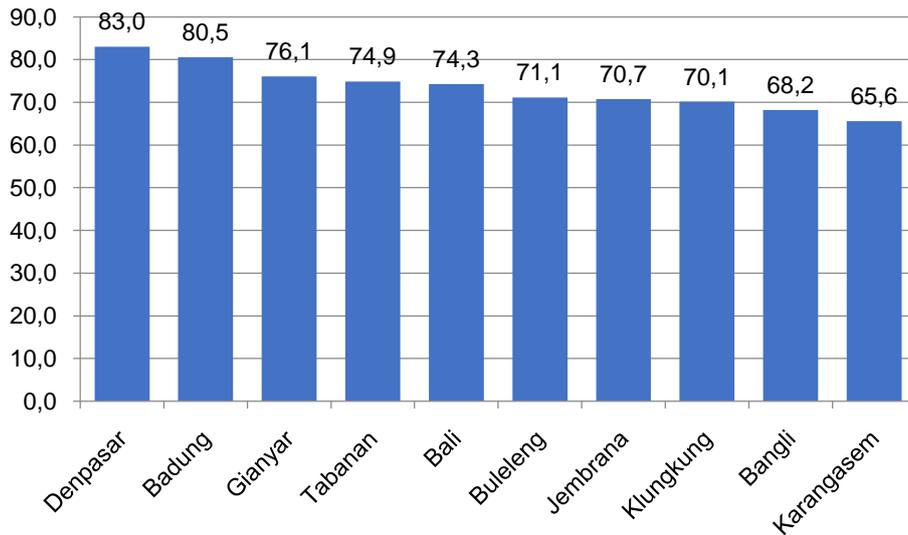


Figure 2 – Human Development Index (HDI) of Regency / Cities in Bali Province In 2017

The results of the Denni Sulistio Mirza (2012) study concluded that capital expenditure and economic growth had a positive effect on the HDI. Likewise, the research of Sumanto and Effendie (2015) concluded that capital expenditure and private investment had a significant effect on the welfare of the people in the regency / cities in East Java Province.

In the context of implementing regional autonomy, the regional government gets several sources of income from the central government in the form of balance funds such as the General Allocation Fund (DAU), Special Allocation Funds (DAK), Revenue sharing Funds (DBH), and other funds. In addition, the regions have the authority to explore financial resources from their own regions, which are called Local government own revenue (PAD). The financial resources mentioned in accordance with the law have their own designation in order to finance development and service to the community.

Revenue sharing funds (DBH) as one component of the balance fund is funds originating from the revenues of the State Budget (APBN) allocated to regions based on certain percentage figures to fund regional needs in the context of implementing decentralization (Ahmad, 2002). DBH transferred by the central government to the regional government consists of two types, namely the revenue sharing fund and non-tax revenue-sharing (natural resources). Regions that have natural wealth and tax revenues will have regional revenues derived from the results of the management of these sources by the central government to finance their regional expenditures (Nazarullah, 2011). The results of the management of these resources are allocated to the regions in the form of (DBH) using the principle of origin (the producing region) and seeing the realization in the APBN.

DBH is a component of balance funds originating from APBN revenues and allocated to regions based on a certain percentage to fund regional needs in the context of implementing decentralization. As stated by Saragih (2003), revenue sharing funds act as a fiscal balance between the center and the regions from the tax that is divided. According to Pipin Syarifin and Dedah Jubaedah (2005) Revenue sharing funds are funds sourced from the state budget allocated to regions based on percentage figures to fund regional needs in the context of implementing decentralization. Previous studies related to DBH were conducted by Aris Setia Budi (2017) in her research at the Regency / City in Central Java in 2012-2014, stating that the Revenue sharing fund (DBH) had a positive effect on the HDI, but was not significant. Nonetheless, the Revenue sharing Fund (DBH) also has an influence on regional government spending. The results of a study conducted by Wulandari (2014) in his

research entitled *The Effect of Revenue Sharing on Regional Expenditures of Regency and Cities in Indonesia* concluded that Revenue sharing funds had a significantly positive effect on regional expenditure.

Other factors that influence the HDI are Local government own revenue (PAD), capital expenditure, and economic growth. Several previous studies regarding, among others, those conducted by Mahendra Putra and Agung Ulupui (2015) showed that Local government own revenue (PAD) had a significant positive effect on HDI of Regency / cities in Bali Province. As stipulated in Law Number 33 of 2004, concerning the Balance of Central and Regional Finance, that in the implementation of regional autonomy, the regions have the authority to explore sources of income in the area called Local Government Own Revenues (PAD). Therefore, in regional autonomy, the regional government is expected to optimize the utilization of its regional potential to be extracted as a source of PAD which is then used to finance development and service to the community in the form of capital expenditure so that welfare increases.

The influence of PAD on capital expenditure can be seen from the research of Novia Nur Putriasani (2010). The study concluded that the greater the PAD of a region, the greater the capital expenditure that can be allocated. Likewise, the results of the research of Denni Sulistio Mirza (2012) concluded that increasing PAD had a positive influence on capital expenditure. The relationship between PAD and capital expenditure can also be seen in the study of Dedi Suprianto (2016) with the title "Effect of Local government own revenue (PAD) on Government Capital Expenditures in Nagan Raya Regency". The study concluded that PAD has a positive effect on capital expenditure. This means that the higher the PAD, the higher the capital expenditure.

Economic conditions are important indicators in the calculation of HDI. The relationship of economic growth to HDI can be seen from the results of the research of Asmita et al. (2017). The results of the study stated that increasing per capita income led to increased public access to education and health so that people's welfare also increased.

Local government own revenue (PAD) also affects economic growth. With the more flexible nature of use, the greater the PAD owned by a region, the greater the economic growth. This can be seen from the research of Hammond and Mehmet S. Tosun (2009) which concluded that decentralization or autonomy reflected by regional financial independence or the ratio between PAD and APBD had a positive impact on economic growth, especially the growth of employment and regional income growth in America. Union.

Capital expenditure in the APBD is a component of spending that is very important for economic growth. Because the realization of capital expenditure implemented by the regional government will have a multiplier effect to drive the wheels of the regional economy. Therefore, the higher the capital expenditure ratio in the APBD structure, the better the effect on the economic performance will be. Conversely, the lower the ratio, the smaller the effect on economic growth. The increase in capital expenditure aims to improve economic performance and also the welfare of the community. According to McEachern (2000) that economic performance indicators are the average income generating society, in addition to the number of workers, the number of production, the number of companies, unemployment, inflation, and others. For regional scale, per capita Gross Regional Domestic Product (GRDP) is the most frequently used economic performance indicator. Guritno (2012) also said that increasing government revenues would encourage the government to increase its expenditure in providing services to the community so that incomes would increase, unemployment and poverty would decrease.

The influence of capital expenditure and PAD on economic growth was examined by Azis (2016). The results of the analysis show that Non-Tax / Natural Resources Revenue Sharing Funds, General Allocation Funds and Local government own revenue simultaneously have a significant effect, and only partially Local Government Own Revenues that have a significant and dominant effect on Economic Growth in Malinau Regency. Likewise, Sondakh et al. (2017) who concluded that there is a positive and significant relationship between government and private investment in increasing employment opportunities and economic growth in the city of Manado. Guritno (2012) also said that

increasing government revenues would encourage the government to increase its expenditure in order to improve economic performance.

Based on the description above this study aims at the Influence of Local Government Own Revenue (PAD) and Revenue sharing Funds (DBH), capital expenditure on economic performance and the community welfare (HDI) in regencies / cities in Bali Province.

LITERATURE REVIEW

Economic performance in a region according to McEachern (2000: 84) can be done in various ways, among others, by looking at the number of workers, average income, total production, number and size of the company. In addition, a measure of economic performance that is often a concern for knowing economic progress in a region or country is economic growth and labor, productivity, living standards, unemployment, inflation, savings and capital formation, and other variables (Abel and Bernake, 2001).

According to Samuelson and Nordhaus (1995) among the benchmarks of economic performance, the most commonly used is Gross Domestic Product (GDP). While GDP itself is defined as the value of goods and services produced in an area of the economy for a certain period of time, generally one year. Gregory and Stuart (1992: 41) suggest that one of the dominant variables used to determine economic performance is the level of economic growth over time. If the production of goods and services produced from time to time has increased, it can be said that the economy is experiencing growth. And to measure economic growth can use GDP values at constant prices (Rahardja and Manurung, 2001: 178).

Local Government Own Revenue, here referred to as PAD is income obtained by regions collected under regional regulations in accordance with laws and regulations". PAD is regional income originating from the results of regional taxes, proceeds from regional levies, the results of separated regional wealth management, and other legitimate local revenue, which aims to provide flexibility to the regions in exploring funding for the implementation of regional autonomy as a manifestation of the decentralization principle (Explanation of Law No.33 of 2004).

PAD is a source of regional income originating from economic activities in the area concerned based on applicable regulations. The types of PAD are classified into 4 (four), namely funds from local tax collection, funds from regional levies collection fees, funds from separated regional wealth management and other legitimate PAD. According to Warsito (2001: 128) Local Government Own Revenue "Local government ownrevenue(PAD) is income that is sourced and collected by the local government. The source of PAD consists of: local taxes, regional retribution, profits from regionally-owned enterprises (BUMD), and other legitimate local revenue". Herlina Rahman (2005: 38) Local government own revenue is regional income originating from the results of regional taxes, the results of the distribution of separated regional wealth management results and other legitimate local revenue in exploring funding in the implementation of autonomy as a manifestation of the principle of decentralization.

Regional financial policy is directed at increasing local government own revenue as the main source of regional income that can be used by regions in implementing regional government and development in accordance with their needs in order to minimize dependence on obtaining top-level funds and government (subsidies). Thus the effort to increase PAD should be seen from a broader perspective not only in terms of each region but also in relation to the unity of the Indonesian economy. PAD itself, is considered as an alternative to obtain additional funds that can be used for various expenditure needs determined by the region itself, especially routine needs. Therefore the increase in income is something that is desired by each region (Mamesa, 1995: 30).

Based on Law Number 33 of 2004 of Indonesian Republic, concerning Financial Balance Between the Center and Regions, "Regional Government Own Revenue, referred to as PAD is income obtained by regions collected under regional regulations in accordance with laws and regulations". PAD is regional income originating from the results of regional taxes, proceeds from regional levies, the results of separated regional wealth management,

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Sources of local government own revenue are:

- a) Regional Tax
- b) Regional Retribution;
- c) Results of Management of the Wealth of Separated Regions
- d) Legitimate Other PAD

Other's sources of regional government's revenue according to Law Number 33 of 2004 concerning Financial Balance between the Central Government and Regional Governments, Balancing Funds are funds originating from APBN revenues allocated to the regions to fund regional needs in the context of implementing decentralization. There are types of balancing funds, namely Revenue sharing Funds (DBH), General Allocation Funds (DAU), and Special Allocation Funds (DAK).

According to Law Number 33 of 2004 article 11, it is stated that Revenue Sharing Funds (DBH) are regional funds including taxes and natural resources. Taxes in this case consist of land and building tax, income tax article 25 and article 29 domestic taxpayers and article 21 income tax, and fees for acquiring land and building rights. But starting on January 1, 2014, for land and building taxes collected by the region. Natural resources consist of forestry, general mining, fisheries, oil mining, natural gas mining and geothermal mining.

In connection with the holding of regional autonomy, the regions need to use funds effectively and efficiently to carry out government and regional development, one of which is by allocating them to capital expenditure. According to Halim (2007) capital expenditure is budget expenditure to obtain fixed assets and other assets that provide benefits for more than one accounting period. According to Bastian (2006), capital expenditure is allocated to accommodate all expenditures related to the purchase of goods for investment needs (in the form of fixed assets and other assets). Capital expenditures made by local governments are intended to procure investment goods or certain facilities in order to provide services to the community directly or indirectly the benefits of the community. Capital expenditure used by Regional Government according to SAP, includes land expenditure; shopping for equipment and machinery; shopping for buildings and buildings; road, irrigation and network shopping; other fixed assets expenditure; and other asset expenditure.

According to Halim (2004), capital expenditure is a expenditure whose benefits exceed one fiscal year and will increase regional assets or wealth and will increase routine

expenditures such as maintenance expenditures. Capital expenditure based on needs means that not all work units or organizational units in the regional government carry out activities or projects to procure fixed assets. In accordance with the main tasks and functions (tupoksi) of each work unit, there is a work unit that provides public servants in the form of provision of physical facilities and infrastructure, such as education, health facilities, roads, bridges, irrigation facilities, etc. Other work only provides direct services in the form of administrative, security, empowerment, health services and education services.

The United Nations Development Program (UNDP) through its serial publications since the early 1990s measured the success of development in a more comprehensive manner using life expectancy, education, and income constructed into the Human Development Index = HDI (Todaro, 2002) Thus, the welfare state is a composite index of indicators of health, education and economy. Health indicators are measured using life expectancy. Educational indicators are measured by literacy and school length variables which are assumed to be able to describe the ability of human resources to find and utilize knowledge and technology. Economic indicators are approached by household expenditure variables as a proxy for household income to meet minimum living needs, while the quality of housing can describe the level of occupancy and welfare of the community.

The UNDP version of the HDI calculation is intended to measure the impact of efforts to improve basic capabilities, using impact indicators as a basic component of calculation, namely life expectancy at birth, educational attainment measured by literacy and average length of school, and adjusted income. The HDI scale is between 0 - 1, the closer to number 1, the better the human development. Indonesia Central Statistic Agency (BPS) has a slightly different calculation with UNDP, BPS version of HDI is based on three categories namely, (1) longevity is reflected in the life expectancy index (index X1); (2) Educational attainment measured by a combination of literacy rates and average length of school (index X2); (3) standard of living measured by the per capita consumption expenditure approach in rupiah PPP (index X3). The HDI scale is between 1 and 100. The closer the HDI value of a region to the number 100 the closer the road must be taken to reach the target. The full HDI calculation is as follows:

$$\text{HDI} = 1/3 (\text{index X1} + \text{index X2} + \text{index X3}) \quad (1)$$

Where: X1 = Life Expectancy Index; X2 = Education Index; X3 = Per capita Expenditure Index; X2 = 2/3 (literacy index) + 1/3 (average length of school index).

METHODS OF RESEARCH

The design of the research is the design, guidance or reference of the research that will be carried out, therefore the design of the research must contain everything that has an interest in the conduct of research (Bungin, 2001). According to the type of data and analysis techniques, this research is quantitative research, which is the type of research that is based on quantitative data or its findings are achieved using statistical procedures or other quantifications. The types of data collected are secondary data, namely data on Local Government Own Revenue (PAD), Revenue Sharing (DBH), capital expenditure, Economic Performance, and HDI for 2010-2017. The data analysis technique used in this study is path analysis / path analysis to determine the effect of PAD and Revenue Sharing Funds, capital expenditures, economic performance on the welfare of the community in regencies / cities in Bali Province, as illustrated in Figure 3.

Operational Definition of Research Variables:

- Local Government Own Revenue is regional revenue derived from the ability of the region itself to manage its sources of income based on the regional regulations themselves. In this study Local Government Own Revenue was obtained from the realization of Regency / City APBD in the Province of Bali divided by the number of population in the Regency / City in the Province of Bali during 2010 to 2017 in units of Rupiah (Rp);

- Revenue Sharing Funds. Because the Province of Bali does not have natural resources, the Revenue Sharing Fund is a transfer fund from the central government originating from state revenues from taxes such as Income Tax Article 21 Income Tax and Income Tax Article 25/29, PBB, and BPHTB. This study uses the variable Realization of Tax Revenue Funds obtained from the realization of the APBD divided by the number of residents in the Regency / City in the Province of Bali during the years 2010 to 2017 in units of Rupiah;
- Capital Expenditures. Capital expenditure is expenditure carried out by the Regional Government in accordance with the needs and or priorities of the region to obtain fixed assets or other assets in order to improve facilities and infrastructure that support services to the community. In this study Capital Expenditures are obtained based on the realization of Capital Expenditures divided by the number of residents in the Regency / City in the Province of Bali during 2010 to 2017 in units of Rupiah;
- Economic Performance. Economic performance in this study uses the Gross Regional Domestic Product (GRDP) per capita calculated by dividing the GRDP data by the population in the Regency / City in the Province of Bali during 2010 to 2017 in units of Rupiah;
- Community Welfare. The welfare of the community in this study uses the Human Development Index (HDI) which is a composite index to regulate the achievement of the quality of human development to live more quality, both in terms of health, education and economics, measured in index units.

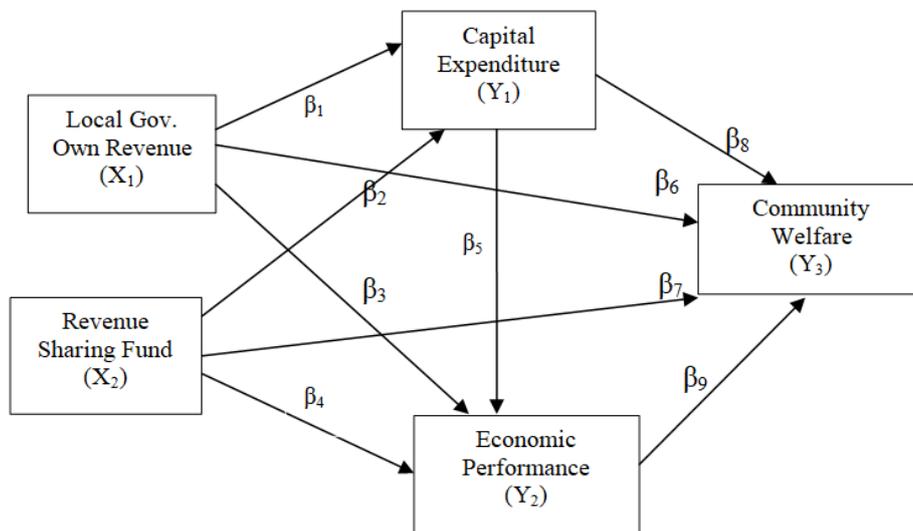


Figure 3 – Research Design Effects of Local Government Own Revenue and Revenue sharing funds on Capital Expenditures, Economic Performance and Community Welfare of Regency / Cities in Bali Province

This study uses quantitative data, namely data in the form of numbers obtained from secondary sources, namely data on Local government own revenue (PAD), Tax Revenue Funds (DBH), and Capital Expenditures obtained from the Bali Provincial Finance Bureau, while Performance Economics and HDI were obtained from the Central Bureau of Statistics of Bali Province during 2010-2017. Thus this study uses panel data which is a combination of cross section data, namely data of regency / cities in Bali Province with time series data during 2010-2017.

The analysis technique used in this study is path analysis using Partial Least Square (PLS). Path analysis is an extension of the application of multiple linear regression analysis to predict causality relationships between variables (casual models) that have been predetermined based on theory. This model is considered to be used in a study if the relationship analyzed is a causal relationship with a complex model. In path analysis there is

a variable that has a dual role, namely as an independent variable in a relationship, but becomes a dependent variable in another relationship. This form of relationship requires an analytical tool that is able to explain the system simultaneously. Kerlinger (2002) states that using path analysis can be calculated directly and indirectly between variables.

Based on Figure 3, a structural equation system can be made as follows.

Relationship between X1 and X2:

$$Y1 = \beta_1 X1 + \beta_2 X1 + \epsilon_1 \quad (1)$$

Relationship between X1 and X2 to Y1:

$$Y2 = \beta_3 X1 + \beta_4 X2 + \beta_5 Y1 + \epsilon_2 \quad (2)$$

Relationship between Y1, Y2 towards Y:

$$Y3 = \beta_6 X1 + \beta_7 X2 + \beta_8 Y1 + \beta_9 Y2 + \epsilon_3 \quad (3)$$

Where: X1 = Local Government Own Revenue per capita (Rp); X2 = Realization of Revenue sharing Funds per capita (Rp); X3 = Capital expenditure per capita (Rp); Y1 = Economic Performance or GRDP per capita (Rp); Y2 = Community Welfare / HDI (index); $\beta_1, \beta_2, \dots, \beta_9$ is the path coefficient; $\epsilon_1, \epsilon_2, \dots, \epsilon_3$ is a error,

RESULTS AND DISCUSSION

Bali Province is one of 33 provinces in Indonesia which has an area of 5,636.66 km² or 0.29 percent of Indonesia's territory. Bali Province consists of one main island, namely Bali Island and several other small islands, such as Nusa Penida Island, Nusa Ceningan Island, Nusa Lembongan Island, Serangan Island and Menjangan Island. Administratively, the Province of Bali is divided into 8 Regencies, 1 City, 57 Regency, 715 Villages, 1,482 Pekraman villages, and 1,604 subak sawahs and 1,107 sub-villages. Area if divided according to regency / city, Buleleng Regency has the largest area of 1,365.88 km², and the smallest is Denpasar City with an area of 127.78 km².

The following will be described regarding the research variables used in the study, namely Local government own revenue (PAD), Revenue sharing funds (DBH), Capital Expenditures, Economic Growth and HDI.

Local Government Own Revenue (PAD) is revenue obtained from the region itself, which consists of: a) regional tax, b) regional retribution, c) from the wealth of the region whose management is separated, and d) others that are legal. To be able to compare PAD of an area with other regions which will later be used to finance services and development, it is divided by the total population.

Table 1 – PAD per Capita Regency / City in Bali Province, 2010-2017 (Thousands of Rupiah)

Regency/City	2010	2011	2012	2013	2014	2015	2016	2017
Jembrana	128.08	140.23	196.53	237.04	259.48	294.58	368.66	435.64
Tabanan	255.71	305.68	387.65	471.49	517.33	605.65	695.37	894.77
Badung	2,251.08	2,723.50	3,161.16	3,445.10	4,107.86	4,594.47	5,071.97	6,617.59
Gianyar	279.28	378.32	473.94	541.69	716.04	825.85	1,013.87	1,323.36
Klungkung	181.43	199.48	227.61	341.92	483.40	568.11	690.32	830.30
Bangli	79.69	100.09	178.33	210.13	298.24	395.33	460.23	521.99
Karangasem	138.96	300.44	320.07	391.15	498.60	568.17	559.24	436.54
Buleleng	123.48	160.20	181.11	226.60	325.75	409.50	485.35	722.13
Denpasar	268.33	405.90	487.11	693.64	745.85	822.73	825.29	1,020.13

Source: *Financial Bureau Province of Bali, 2018.*

Table 1 shows the PAD per capita in regencies / cities in Bali Province during 2010 - 2017. In general, Regency / City PAD in Bali Province is still uneven and tends to have

unbalanced capabilities as shown in Table 1 where regions have a lot of potential tourism, obtaining high PAD while those with limited tourism potential receive small PAD. This certainly will have an impact on development in the area concerned. However, from year to year all regency / cities experienced an increase in PAD, such as Jembrana Regency in 2010 per capita PAD of Rp. 128,080.00 increased to Rp.435,350.00 in 2017.

Revenue sharing funds transferred by the central government to regional governments consist of two types, namely the revenue sharing fund and non-tax revenue-sharing (Natural Resources). In Table 2 shows that from 2010 to 2017 the Badung Regency and Denpasar City received the largest revenue-sharing funds due to the high investment transactions which resulted in high payments for land and building taxes, so that Badung Regency and Denpasar City were allocated high Revenue sharing Funds. In addition, Revenue sharing funds obtained by the governments of Buleleng and Denpasar City decreased from 2016 to 2017.

Table 2 – Regency / City Per Capita Revenue sharing Funds in the Province of Bali, 2010-2017
(Thousands of Rupiah)

Regency / City	2010	2011	2012	2013	2014	2015	2016	2017
Jembrana	103.16	79.56	92.84	82.20	72.04	79.63	81.10	93.75
Tabanan	83.05	62.55	70.60	52.57	55.52	57.00	58.83	70.23
Badung	400.21	206.04	159.66	104.05	98.67	115.03	134.21	133.92
Gianyar	70.15	48.86	60.16	84.46	52.66	54.24	58.43	61.55
Klungkung	121.17	98.53	115.90	117.50	102.00	113.95	115.49	139.46
Bangli	102.91	85.50	100.17	100.82	78.49	89.54	87.26	101.95
Karangasem	63.79	55.08	65.42	72.69	54.05	59.61	56.61	69.68
Buleleng	81.50	62.48	61.76	63.35	54.13	56.72	50.54	44.47
Denpasar	152.48	112.82	139.80	88.22	80.43	90.61	108.37	105.90

Source: *Financial Bureau Province of Bali, 2018.*

The allocation of capital expenditure for Bali Province and regency / city in Bali is very fluctuating for each year, this is due to lack of knowledge of the impact of capital expenditure on community economic growth so that the attention of local governments does not have a provision in allocating capital expenditure in regional income and expenditure budgets. Therefore it is deemed necessary by the Central Government to emphasize the obligation for regions to budget Capital Expenditures of at least 20 percent of the total Regional Expenditures for each guideline for annual budget and expenditure.

Table 3 – Regency / City per capita Capital Expenditures in Bali Province, 2010-2017
(Thousands of Rupiah)

Regency / City	2010	2011	2012	2013	2014	2015	2016	2017
Jembrana	303.20	372.76	553.38	571.92	641.56	731.27	1301.94	1273.22
Tabanan	255.88	231.93	348.51	325.41	341.49	287.68	634.13	1185.72
Badung	511.84	571.97	1293.35	1445.92	1811.15	1797.48	2285.53	2297.90
Gianyar	279.53	258.91	284.53	408.72	462.33	447.60	735.12	868.73
Klungkung	441.10	533.08	578.05	539.99	712.04	800.67	1398.74	1186.18
Bangli	400.76	581.17	410.90	334.36	401.40	592.10	1406.28	1133.39
Karangasem	300.41	384.19	536.31	485.58	514.58	511.67	629.07	718.19
Buleleng	154.93	261.52	224.54	340.18	348.50	362.27	627.06	513.76
Denpasar	104.80	129.95	291.43	356.31	353.45	274.89	328.76	353.92

Source: *Financial Bureau Province of Bali, 2018.*

In Table 3, we can see the description of capital expenditure in 2010-2017 in the three regency / city governments in Balir, the capita capital expenditure in Badung, Jembrana, and Klungkung Regency is quite large. Badung Regency is Rp.2,297,900.00, Jembrana Regency Rp.1,273,220.00.00 and Klungkung Regency Rp.1,186,180.00. In 2017, it can be seen that the capital expenditure per capita of regencies / cities in the province has increased compared to the previous year except Buleleng Regency which experienced a decrease in

capital expenditure, namely in 2016 the capital expenditure per capita was Rp. 627,060.00 to Rp. 513,760.00 in 2017.

According to McEachern (2000) that economic performance indicators are the average income generating society, in addition to the number of workers, the number of production, the number of companies, unemployment, inflation, and others. For regional scale, per capita Gross Regional Domestic Product (GRDP) is the most frequently used economic performance indicator. Table 4 shows the per capita GRDP of regencies / cities in Bali Province during 2010 - 2017. The highest per capita GRDP is owned by Badung Regency, and then followed by Denpasar City. The region with the lowest per capita GRDP is Karangsem Regency.

Table 4 – Regency / City GRDP Per Capita at Constant Prices 2010 in Bali Province, 2010-2017 (Millions of Rupiah)

Regency / City	2010	2011	2012	2013	2014	2015	2016	2017
Jembrana	21.57	23.81	26.19	28.99	33.43	37.83	40.95	44.40
Tabanan	22.08	24.36	26.81	30.11	34.77	39.47	42.57	46.60
Badung	38.14	41.91	47.31	53.97	61.50	66.97	74.95	81.32
Gianyar	23.12	25.48	28.27	31.62	36.51	40.50	44.29	48.26
Klungkung	20.92	23.06	25.44	28.18	32.47	36.50	40.33	44.25
Bangli	12.71	14.02	15.38	17.18	19.80	22.42	24.44	26.81
Karangasem	16.97	18.61	20.47	22.99	26.53	30.10	32.74	25.53
Buleleng	21.75	24.10	26.69	29.99	34.78	39.45	42.68	46.80
Denpasar	25.61	27.95	31.15	34.73	39.61	43.68	47.81	51.58

Source: Bali Central Statistic Agency, 2018.

Community welfare in this study uses the Human Development Index (HDI) indicator of HDI is a composite index to regulate the achievement of the quality of human development to live a better quality, both from the aspect of health, education and economics (Christy and Priyo Hari Adi, 2009). The HDI measures the achievements of human development based on a number of basic components of quality of life. As a measure of quality of life, HDI is built through a basic three-dimensional approach. These dimensions include longevity and health, knowledge, and a decent life.

Table 5 shows data on Regency / City HDI in Bali Province in 2010-2017 which increased, namely 70.07 in 2006 to 75.43 in 2017 and it is known that human development in each Regency / City in Bali Province is above the average national level. Based on Table 5.9 it can also be seen that HDI in Bali Province occurs in disparities between regency / cities. In 2010 the first order of HDI was owned by Denpasar City, then followed by Tabanan Regency, while the lowest was Karangasem Regency. In 2017 overall the regency / city HDI experienced an increase accompanied by ranking changes. The city of Denpasar in 2017 is still in first place, and then followed by Badung Regency, and the lowest is still owned by the Regency of Karangasem. In 2010 Buleleng Regency ranked 2nd to 3rd place in 2017. Jembrana Regency in 4th place ranked 5th as the 5th place in 2017.

Table 5 – Regency / City Human Development Index (HDI) in Bali Province, 2010-2017

Regency / City	2010	2011	2012	2013	2014	2015	2016	2017
Jembrana	66.70	67.53	67.94	68.39	68.67	68.67	70.38	70.72
Tabanan	70.68	71.35	71.69	72.31	72.68	72.68	74.19	74.86
Badung	75.84	76.66	77.26	77.63	77.98	77.98	79.80	80.54
Gianyar	71.45	72.50	73.36	74	74.29	74.29	75.70	76.09
Klungkung	66.01	67.01	67.64	68.08	68.30	68.30	69.31	70.13
Bangli	63.43	63.87	64.53	65.47	65.75	65.75	67.03	68.24
Karangasem	60.58	61.60	62.95	63.70	64.01	64.01	65.23	65.57
Buleleng	66.98	67.73	68.29	68.83	69.19	69.19	70.65	71.11
Denpasar	79.19	79.77	80.45	81.32	81.65	81.65	82.58	83.01
Bali	70,10	70,87	71,62	72,09	72,48	73,27	73,65	74,30

Source: Bali Central Statistic Agency, 2018.

The structural model in PLS needs to be evaluated for its accuracy by using the R-square for the dependent variable and its significance value based on the t-values in each path. The structural model of this research can be seen in Figure 2.

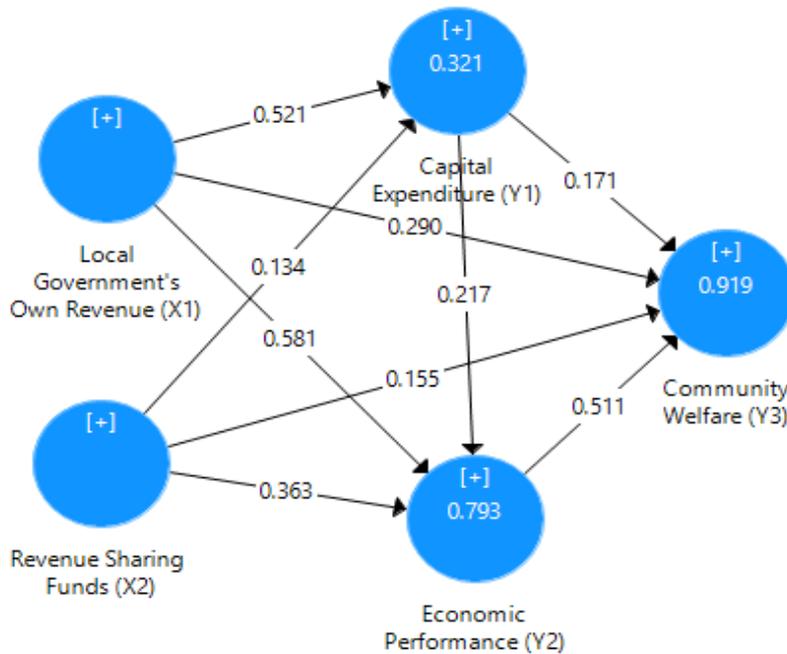


Figure 2 – Path Coefficient of Effect of Local Government Own Revenue and Revenue Sharing Funds on Capital Expenditures, Economic Performance and Community Welfare of Regency / Cities in Bali Province, 2010-2017

Assessing the inner model is the same as looking at the relationship between latent variables by looking at the results of the path coefficient estimation and the significance level. Table 6 shows the R-square value for each endogenous variable. Table 6 shows the R-square value of 0.321 for the capital expenditure variable. It means that the variability of capital expenditure can be explained by the variable PAD and DBH of tax of 32.1 percent, and the remaining 67.9 percent is explained by other factors. Furthermore, the economic performance variable with R-square is 0.793, meaning that the variable can be explained by the PAD, DBH and capital expenditure variables of 79.3 percent, and the remaining 20.7 percent is explained by factors other than the three. While the R-square value for the HDI variable is 0.919, which means that the variability of HDI can be explained by the PAD variable, DBH, capital expenditure, and economic performance by 91.9 percent, and the remaining 8.1 percent is explained by other factors.

Table 6 – R-square value of Variable Capital Expenditure, Economic Performance, and Community Welfare of Regency / Cities in Bali Province, 2010 - 2017

Variable	R Square	Relationship Criteria
Capital Expenditure (Y1)	0,321	Moderate
Economic Performance (Y2)	0,793	Strong
Community Welfare (Y3)	0,919	strong

Source: Research Results.

Chin (1998) categorized R-square into three categories, namely substantial (> 0.67), moderate (0.33 - 0.67), and weak (<0.33). So that the R-square value for the capital expenditure variable is categorized as moderate, while the R-square value for the variable economic performance and public welfare is a strong category. Based on R² in Table 5.10, Q² or Stone Geiser Q-Square tests can be calculated, namely:

$$Q^2 = 1 - \{(1 - R_1^2) (1 - R_2^2) (1 - R_3^2)\} = 0.989$$

The result of Q^2 calculation is 0.989 so that it can be said to have a strong predictive prevalence, so that the resulting model is worthy of being used to predict. The number of 0.989 can be interpreted that the variation of community welfare by 98.9 percent can be explained by variations in the PAD variable, DBH, capital expenditure, and economic performance, while the remaining 1.1 percent is explained by other variables outside the model.

Analysis of direct effects can explain the relationship between variable research (latent variables). To find out the direct effect between variables can be seen from the results of the analysis of the value of the path coefficients shown in Table 7. Based on Table 7, it can be explained that the influence between research variables is positive and significant. Except for the effect of DBH on capital expenditures that are not significant if viewed from the p-value greater than 0.05. In other words, PAD has a positive and significant effect on capital expenditure, PAD, DBH, and capital expenditure, have a positive and significant effect on economic performance, and PAD, DBH, and capital expenditure, and economic performance have a positive and significant effect on the welfare of society.

Table 7 – Direct Inter-Variable Effects of Local Government Own Revenue and Revenue sharing funds on Capital Expenditures, Economic Performance and Community Welfare of Regency / Cities in Bali Province, 2010-2017

Variable Relationship	Coefficient	Std. Deviation	T. Statistic	P. Value
X1 → Y1	0.521	0.09	5.793	0.000
X2 → Y1	0.134	0.082	1.628	0.104
X1 → Y2	0.581	0.079	7.392	0.000
X2 → Y2	0.363	0.089	4.071	0.000
Y1 → Y2	0.217	0.08	2.721	0.007
X1 → Y3	0.29	0.042	6.958	0.000
X2 → Y3	0.155	0.045	3.459	0.001
Y1 → Y3	0.171	0.073	2.347	0.019
Y2 → Y3	0.511	0.073	6.073	0.000

Source: Research Results.

Note: X1 = Local Government Own Revenue (PAD); X2 = Revenue sharing Funds (DBH); Y1 = Capital Expenditures; Y2 = Economic Performance; Y3 = Community Welfare.

Furthermore, based on the research design, it is also known that there are several relationships which are indirect influences between research variables. To find out the indirect effects between variables can be seen from the results of the indirect effects value analysis shown in Table 8.

Table 8 – Indirect Effects Between Variables of Local Government Own Revenue and Revenue sharing Funds on Capital Expenditures, Economic Performance and Community Welfare of Regency / Cities in Bali Province, 2010 – 2017

Variable Relationship	Melalui	Variable Relationship	Coefficient	Std. Deviation	T. Statistic
X1 → Y2	Y1	0.113	0.042	2.707	0.007
X1 → Y3	Y1, Y2	0.444	0.059	7.522	0.000
X2 → Y2	Y1	0.029	0.019	1.566	0.118
X2 → Y3	Y1, Y2	0.223	0.055	4.067	0.000
Y1 → Y3	Y2	0.111	0.041	2.699	0.007

Source: Research Results.

Note: X1 = Local Government Own Revenue (PAD); X2 = Revenue sharing Funds (DBH); Y1 = Capital Expenditures; Y2 = Economic Performance; Y3 = Community Welfare.

Based on Table 8 it is known that the indirect effect of regional income, revenue sharing funds on the human development index through capital expenditure and economic performance of Regency / cities in Bali Province is significant, with P.Value less than 0.05, but not in influence Direct DBH on economic performance through capital expenditure is not significant. This can be seen from the p-value in the relationship of the indirect effect of DBH

on economic performance through capital expenditure which is worth 0.118 or greater than 0.05.

DISCUSSION OF RESULTS

Effect of Local Government Own Revenue (PAD) and Revenue sharing Funds (DBH) on Capital Expenditures of Regency / City in Bali Province. The results of data analysis show that Local Government Own Revenue (PAD) has a positive and significant effect on capital expenditure of Regency / city in Bali Province. This means that the higher the PAD, the allocation for capital expenditure in the Regency / City APBD in the Province of Bali also increases, and vice versa. If PAD decreases, capital expenditure also decreases. As with the case with Revenue sharing Funds (DBH), it does not have a significant effect on capital expenditure. This shows that if the DBH has increased, there is no significant increase in capital expenditure.

As the results of previous research from Priambudi (2017), that PAD turned out to have a positive and significant effect on capital expenditure in Java regency and cities in 2013. Likewise, it was also presented in the results of Pradata's research (2015) that PAD had a positive and significant effect on regency capital expenditure and cities in Central Java in 2011-2013. The results of this study are not in accordance with the results of previous studies from Syahputra (2010) which explained that Production Sharing Funds have a positive and significant correlation in regional expenditure. Yusriadi (2017) also found that the Revenue Sharing Fund partially had a significant effect on regency / city expenditure in Aceh. Likewise the results of Wulandari's (2014) research that Revenue sharing funds have a positive and significant effect on regional expenditure in the 2009-2011 period. The regional government that has a high DBH, the expenditure for regional expenditure allocation is also higher.

DBH has a large portion of regional finance. This indicates that the regional government still has a large dependence on the central government in financing regional expenditure and expenditure. However, in the long run, this kind of dependency must be even smaller. According to Harahap (2009), various investments made by regional governments are expected to provide positive results, so that more independent local governments can take advantage of the potential and resources in their regions to be able to meet regional expenditure and not rely on the central government in terms of financing government spending and expenditure area.

Effect of Local Government Own Revenue (PAD), Revenue sharing Funds (DBH), and Capital Expenditures on Economic Performance of Regency / City in Bali Province. Based on the results of data analysis it is known that PAD, DBH, and capital expenditure have a positive and significant effect on the economic performance of regency / cities in Bali Province. This means that if PAD, DBH and capital expenditure increase, it will have an effect on improving economic performance significantly, and vice versa. The results of these studies are in accordance with Widyasari's (2013) study of the influence of PAD, DBH, DAU, and DAK on the regency / city economic growth (GRDP) in Central Java Province. From the results of this study it can be concluded that PAD and DAK have no significant effect on GRDP. While DBH and DAU have a significant effect on GRDP.

Effect of Local Government Own Revenue (PAD), Revenue sharing Funds (DBH), Capital Expenditures, and Economic Performance on Community Welfare of Regency / City in Bali Province. The results of data analysis show that PAD, DBH, capital expenditure, and economic performance of regency / cities in Bali Province have a positive and significant effect on community welfare. This means that, increasing PAD, DBH, capital expenditure, and economic performance of regency / cities in Bali Province, will have an impact on improving community welfare significantly. The results of this study are also supported by previous research which also shows results as in this study. Wardani (2018) conducted a study on the effect of regional assets, PAD, balance funds, and capital expenditure on the community welfare (HDI) in the Regency and City Governments of Central Java Province 2014-2016. The results of Wardani's research (2018) show that PAD has an effect on the

human development index. While regional assets, balancing funds and capital expenditure have no effect on the human development index.

PAD plays an important role in improving the quality of human development in each regency and city. Increased Local Government Own Revenue will contribute to efforts to improve the welfare of the community, which in turn will be used to build and repair infrastructure for public needs such as improving facilities for supporting health, education and public facilities. PAD is the most important source of financing in supporting regional capacity in carrying out regional autonomy. In this context, PAD as a measure of regional own is highly expected as a source of funding for improving services and welfare for the community to build their regions including the quality of life of the people in the regions reflected in the human development index (HDI).

Local Government Own Revenue (PAD) in the era of regional autonomy should be the main basis for the region, so that regional dependence on the central government through balanced funds is decreasing and in the end the regions have the power to fulfill all their needs related to public service procedures. Whereas according to Law No. 33 of 2004 that PAD is income earned by regions collected under regional regulations in accordance with laws and regulations, consisting of regional taxes, regional levies, separated regional wealth management results and other legitimate PAD. The research conducted by Yanto et al. (2018) shows that local revenue has a significant effect on the human development index. In contrast to the research of Anggraini and Sutaryo (2015), it is proven that regional income does not affect the human development index.

Capital Expenditures are regional government expenditures whose benefits exceed one fiscal year and will add assets or wealth to the region and subsequently will add routine expenditures such as maintenance costs to general administration expenditure groups (Halim, 2004). The regional government allocates funds in the form of a capital expenditure budget in the APBD to add fixed assets. The research conducted by Yanto et al. (2018) shows the results of research that capital expenditure has an effect on the human development index.

Indirect Effects of Local Government Own Revenue (PAD), Revenue sharing Funds (DBH) on Economic Performance Through Capital Expenditures and Economic Performance of Regency / City in Bali Province. Based on the results of analysts it is known that PAD indirectly has a significant effect on economic performance through capital expenditure of regency / city in Bali Province, meaning that the influence of PAD on subsequent capital expenditure will have a significant impact on economic performance. However, it is also known that indirect DBH does not have a significant effect on economic performance through capital expenditure. This shows that DBH does not have a significant impact on economic performance if through capital expenditure.

The results of this study have similarities with the research of Dewi and Budhi (2015) on the influence of PAD and DBH on economic growth through direct shopping in Bali Province. The results obtained indicate that the Local Government Own Revenue has a direct effect on Direct Spending, but the Revenue Sharing Fund does not directly affect Direct Spending. Furthermore, Direct Sharing and Expenditure Funds have a direct effect on economic growth, while Local government own revenue does not have a direct effect on economic growth. Then the Local government own revenue has an indirect effect on economic growth through Direct Spending, while the Revenue Sharing Fund does not have an indirect effect on economic growth through Direct Spending.

Regarding him above, Bose and Osborn (2007) found that government capital expenditure proved to be able to influence economic growth positively and significantly, where economic growth in the study was proxied through GDP. The results of the same study were also obtained by Chude and Chude (2013) which proved that capital expenditure had a positive effect on economic growth. This proves that the high realization of direct spending is an important indicator in supporting economic growth.

The results of data analysis show that PAD, DBH and capital expenditure indirectly have a significant effect on community welfare through the economic performance of regency

/ cities in Bali Province. This means that in order for PAD, DBH and capital expenditure to have a significant impact on community welfare, it can be done through capital expenditure.

The results of this research have matched the research of Wijayanti and Darsana (2015) investigating the influence of PAD and DAU on community welfare through economic growth (study of Regency / Cities in Bali Province 2008-2013). The results of the analysis show that PAD and DAU have a significant positive effect on economic growth. PAD and DAU have no direct effect on people's welfare, while economic growth has a positive and significant effect on people's welfare. Economic growth is a variable that fully mediates in the influence of PAD and DAU on people's welfare.

Various efforts are designed and implemented by the local government solely in order to increase growth for the region itself and subsequently it is expected to have a positive impact on the welfare of its people. One of the efforts made by the regional government in achieving its objectives is the implementation of development as a form of decentralization. According to Dewi and Sutrisna (2014), states that public welfare is one of the final goals of the realization of an effective and efficient government in the framework of creating fiscal decentralization. Socio-economic development that reflects the welfare of the community in an area is expected to be realized by efforts made by the regional government (Akudugu, 2012). Efforts to implement development in each region are part of the implementation of regional autonomy. The implementation of regional autonomy is an attempt by the central government to give responsibility or authority to local governments in managing, regulating and managing their own households in accordance with the regulations in the laws and principles of regional autonomy.

CONCLUSION AND SUGGESTIONS

Local Government Own Revenue has a positive and significant effect on capital expenditure, but the Revenue Sharing Fund does not have a significant effect on capital expenditure of regency / city in Bali Province.

Original Regional Revenue, Revenue Sharing funds and capital expenditure have a positive and significant effect on the economic performance of Regency / Cities in Bali Province.

Regional Local Government Own Revenue, Revenue Sharing Funds, capital expenditure, and economic performance on the welfare communities of the Regency / City in the Province of Bali.

Local Government Own Revenue and Revenue Sharing funds indirectly have a significant effect on community welfare through capital expenditure and economic performance of regencies / cities in Bali Province.

Based on the results of the analysis and conclusions obtained, it is recommended that the regional government be more careful in allocating Revenue Sharing Funds, especially tax Revenue sharing Funds so that they are allocated for capital expenditure to support national development priority activities.

This research is only carried out in the province of Bali, so that these results cannot be thoroughly used as a reference for assessing welfare in other provinces in Indonesia. This study only focuses on variables that affect people's welfare, such as local revenue, capital expenditure, revenue sharing and economic performance. Future research can discuss or add other variables outside of this model such as quality of life, number of poor people, and the level of unemployment.

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THE EFFECT OF KNOWLEDGE MANAGEMENT AND HUMAN RESOURCE DEVELOPMENT ON EMPLOYEE PERFORMANCE AT PT. SKY PACIFIC INDONESIA

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ABSTRACT

The most important asset in a business company to be able to compete in the long term is its human resources. Knowledge possessed by each individual in a company is a key factor so that the company can be superior to its competitors. Knowledge possessed by each employee can improve the performance and image of a company in the eyes of consumers. The object of this research is PT. Sky Pacific Indonesia. PT. Sky Pacific Indonesia is a business company that provides environmental testing laboratory services, established in Bogor Indonesia in 2009. The business sector of the company is highly dependent and relies on the competence and knowledge of its human resources. The purpose of this study was to determine how much knowledge management and human resource development affect the performance of PT. Sky Pacific Indonesia. 62 respondents were used as the samples of this study, the research data was primary data taken from questionnaires and company data. The data obtained from the questionnaires were then processed using a quantitative method with path analysis technique. Research shows a positive and significant influence between variables. The results showed that knowledge management affected 20.20% of employee performance, then the human resource development affected 36.38% of employee performance, and the effect of knowledge management and human resource development on performance was 41.42%, this could be interpreted that knowledge management and the human resource development affects the level of company performance.

KEY WORDS

Knowledge, management, human resources, development, employee, performance.

Today's business world is moving very fast, this requires various business companies to keep abreast of developments, changes, and demands of their customers in order to become a superior company to their business competitors. To be a superior company, there must be some qualities possessed which are surpassing its competitors, one of the most important assets that a company must possess to exceed its competitors is knowledge.

Knowledge is the main capital of an organization to be able to always compete with its competitors and also as the main capital in the survival of an organization. The ability to gather, interpret, direct, and communicate knowledge is the most basic material in developing an innovative organization. Carol Stephenson President and CEO of Stentor Resource Centre Inc. also said "*Knowledge, without a doubt, is the critical capital in any modern organization. The ability to collect, interpret, direct and communicate knowledge is fundamental to developing an innovative organization*" (Manele Moses, 2005; 1). Without a doubt, knowledge is the most important capital in any modern organization, therefore we need a knowledge management in a company or organization to manage that knowledge. To improve performance, in addition to knowledge management, human resource development is also needed. The human resource development is conducted so that the process of knowledge transfer can be carried out well.

LITERATURE REVIEW

Before understanding knowledge management (KM), it is important to first review what is called as knowledge. According to Alavi and Leidner (2001;107) knowledge is described

as a state of mind where knowing and understanding is obtained through experience or learning. Notoatmodjo (2007; 139), interpreted knowledge as the result of knowing, and this occurs after people have sensed a particular object, sensing occurs in the human senses in the forms of the sense of sight, hearing, smell, taste, and touch. Most human knowledge is obtained through the eyes and ears. Knowledge, or cognitive knowledge, is a very important domain in shaping one's actions. Frappaolo and Wayne (1997; 12) stated that knowledge is a piece of information located in the human mind which is useful for decision making even in different conditions. Kimiz Dalkir (2011: 9) in broad outline of knowledge in business, it can be divided into two types, Tacit Knowledge (Implicit) and Explicit knowledge:

Tacit Knowledge. Tacit knowledge is basically very personal and difficult to formalize, so it is difficult to be communicated to others, Nonaka & Takeuchi (1995; 8). Tacit Knowledge is stored in the minds of each person and is difficult to share. Tacit Knowledge is difficult to articulate, write, and describe in words.

Explicit Knowledge. Explicit Knowledge is the knowledge that can be expressed in words and numbers and can be easily communicated and shared in the form of complicated data, scientific formulas, codified procedures, or universal principles, Nonaka & Takeuchi (1995; 8).

The knowledge possessed by the company is a combination of tacit and explicit knowledge, therefore Knowledge Management is needed to capture all of these types of knowledge and then be used for the company's interests.

Table 1 – Classification of Knowledge Types

Explicit Knowledge	Tacit Knowledge
Tangible	Intangible
Physical objects such as documents, databases.	Mental objects such as thoughts, reasons.
Does not depend on context	Context affects meaning
Easy to share	Need efforts to express and share the knowledge
Easy to reproduce	Not easy to replicate/imitate

Source: Khoe Yao Tung (2018; 50)

Knowledge management is all activities that include the process of finding, obtaining, making, sharing information or knowledge that is tacit and explicit, which then to be used for the benefit of the company to create an effective and efficient company and to be used as much as possible by its employees to improve their performance in achieving company goals and then that knowledge use is employed to achieve company goals. Sue Brelade & Chris Harman (2003: 5) stated that knowledge management is the process of connecting the right people with the right information at the right time. According to Honeycutt (2005) there are several dimensions that can be used to measure knowledge management within a company, they are: Personal Knowledge; Job Procedures; Technology.

The human resource development for business enterprises is generally aimed at increasing employee productivity and making the company superior to its competitors. The development of human resources (HR) is more focused on training both formal and non-formal provided by companies or organizations for the purpose to develop the skills, knowledge, and abilities of employees. The company's HR development process begins with recruitment and continues as long as the HR works for the company. Harris and DeSimone (1998: 2) stated about human resource development: "*Human resource development can be defined as a set of systematic and planned activities designed by an organization to provide its members with necessary skills to meet current and future job demands*". Wayne R Mondy (2010) defined human resource development as a management effort that is carried out well and continuously in order to improve employee competency and organizational performance through HR training, education and development.

Employee Performance is the result or output produced by the employee and the output can be measured and assessed. Armstrong and Baron in Ma'aruf (2016;3) stated that performance is the result of work that has strong relationships with goals, organizational

strategy, customer satisfaction, and economic contribution. Veitzal Rivai et.al (2016; 1) defined performance as a general term that is used for part or all of the actions or activities of an organization in a period with references to a number of standards such as past or projected costs, with the basis of efficiency, accountability or management accountability and the likes. Gomes (2010; 142) argued that there are 8 (eight) variables that can be used to measure employee performance based on specific behavior, they are:

- Quantity of work, the number of jobs completed in a given period;
- Quality of work, the quality of work produced based on predetermined provisions;
- Job Knowledge, the knowledge the employees have about their work;
- Creativeness, the authenticity of the ideas that are created and carried out in solving problems that arise in the work;
- Cooperation, the ability to work with other people in the company;
- Dependability, can be trusted to complete the work;
- Initiative, enthusiasm in doing new jobs with more responsibilities;
- Personal Qualities, the qualities possessed as a person who include personality, leadership, and integrity.

FRAMEWORK OF STUDY

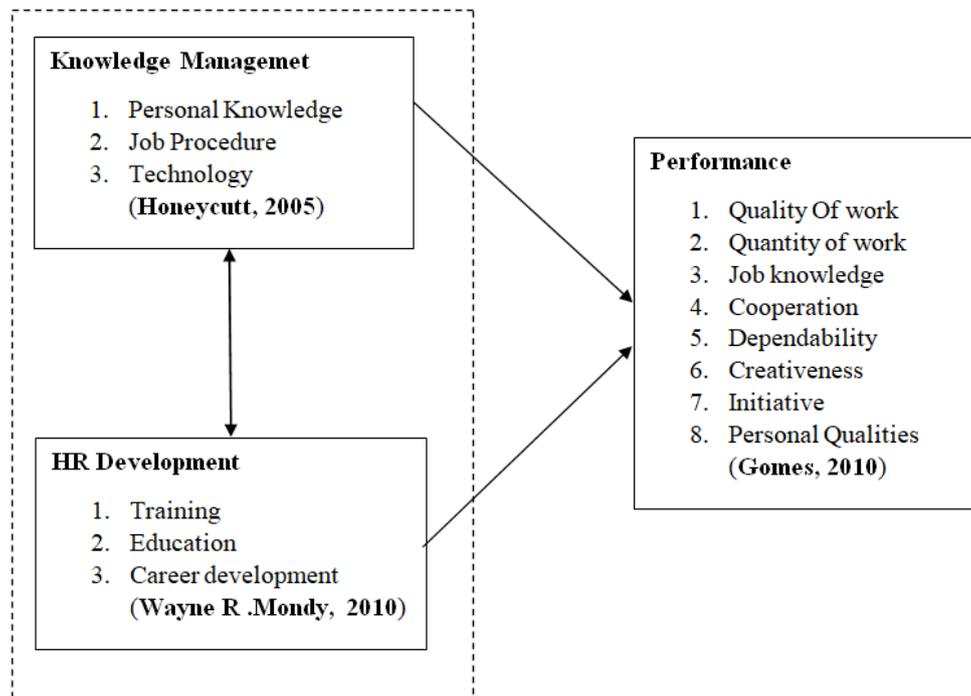


Figure 1 – Research paradigm

Khoe Yao Tung (2018: 103) described the benefits of knowledge management for developing human resources, including:

- Helping employees to keep up to date, this is because, with good knowledge management, the company can make its employees always have the latest knowledge that is useful for developing themselves as individuals;
- Measuring the value of knowledge assets, with knowledge management, the company can assess the knowledge assets owned by each of its employees so the company can determine the education and training programs needed by these employees;
- Helping each employee to carry out their work. Increased knowledge due to the application of knowledge management can make employees quickly adapt to their jobs;

- Making the employees have fast and good decision-making and problem-solving;
- Providing a challenge to contribute to the company;
- Facilitating knowledge growth, through culture and incentives;
- Transferring existing knowledge, so that it can become the parts of the organization.

Gouzali in kadarisman (2012; 3) stated: The human resource development is an activity that must be carried out by organizations, so that their knowledge, abilities, and skills are in accordance with the demands of the work they do, the indicators of human resource development are training and education, these activities aim to increase knowledge and improve the skills of the participants, the material provided is explicit knowledge so that it can be easily delivered and learned by trainees.

The process of knowledge management includes the process of creation, dissemination through the transfer of knowledge, then the storage, and the last is the use and application of this knowledge into daily practice which can indirectly improve employee performance. Khoe Yao Tung (2018;3) revealed that knowledge management basically consists of a systematic process to obtain, organize, maintain, implement, share, and renew all forms of knowledge in order to improve organizational performance and to create value.

Performance is a record of production results in a job function that specifies activities for a certain period. It can be measured through 8 (eight) variables: Quantity of work, Quality of work, Job Knowledge, Cooperation, Dependability, Creativeness, Initiative, and Personal Qualities. (Gomes; 2010). A company requires cooperation from various stakeholders to be able to achieve its objectives, for which maximum performance is needed so that the goal is achieved. The performance of the company is very dependent on the performance of its Human Resources, therefore the efforts for human resource development are carried out to improve skills and increase knowledge of the HR, for the purpose of creating quality Human Resources. The aim of HR development is to increase the quantity and quality of output (Veithzal Rivai et.al 2015; 667). Quality human resources will certainly produce quality performance output as well

Based on the framework and literature review, the following hypotheses can be made:

- Knowledge management has a significant effect on the performance of employees at PT Sky Pacific Indonesia;
- Human Resource Development has a significant effect on the performance of employees at PT. Sky Pacific Indonesia;
- Knowledge management and Human Resource Development have a significant effect on the performance of employees at PT. Sky Pacific Indonesia.

METHODS OF RESEARCH

This study contains hypotheses that have a theoretical basis and procedures for compiling theories through deductive logic (Usman and Akbar 2003; 91). The hypothesis will be tested by path analysis (reason analyzer), with the reason to show and test the model of relationships between variables in the form of causality (not interactive / reciprocal relationships). Data obtained from questionnaire results as a basic data collection tool then processed using quantitative methods. Quantitative method is a process of finding knowledge that uses data in the form of numbers as a tool to analyze information about what you want to know (Kasiram 2008: 149).

The characteristics of the respondents consist of data on sex, age and type of work at PT. Sky Pacific Indonesia in Table 2.

Before the verification test with path analysis was carried out, the data normality test was first performed to determine whether the data were normally distributed or not. If the data were normally distributed, the verification analysis was done by the parametric method, but if the data were not normally distributed, the verification analysis was done by the non-parametric method. Using the help of the SPSS version 22.0 program application, the output of the following normality test results was obtained (Figure 2).

Table 2 – The Respondents' Sex

Sex	Total	Percentage
Male	44	71 %
Female	18	29 %
Total	62	100 %

Table 3 – The Respondents' Age

Age	Total	Percentage
21-30	42	68%
31-40	10	16 %
41-50	5	8 %
50-57	5	8%

Table 4 – The Respondents' type of work at PT. Sky Pacific Indonesia

Type of work	Total	Percentage
Leader (Director and Manager)	9	15 %
Laboratory (Advisor, Supervisor, lab tech and analyst)	18	29%
Technician and Sampling Officer	31	50%
Administrative staff	4	6%
Total	62	100%

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		62
Normal Parameters ^{a,b}	Mean	,0000000
	Std. Deviation	6,30493158
Most Extreme Differences	Absolute	,112
	Positive	,070
	Negative	-,112
Kolmogorov-Smirnov Z		,885
Asymp. Sig. (2-tailed)		,413

a. Test distribution is Normal.

b. Calculated from data.

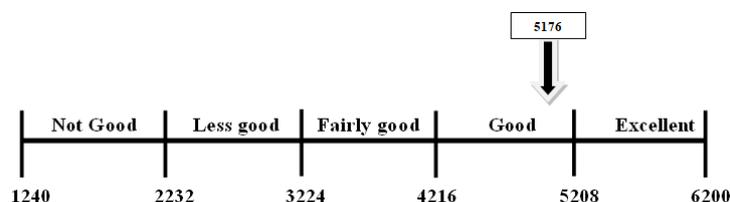
Figure 2 – Normality Test Results

Based on the SPSS output above, the normality test Sig. value was obtained using the Kolmogorov-Smirnov method by 0.413. Because the value of the p-value was greater than alpha ($0.413 > 0.05$), it can be concluded that the data were normally distributed, so that the verification analysis was done by the parametric method of path analysis.

Based on the research instrument testing that had been conducted, it was found that all statement items had a validity coefficient (pearson product moment) greater than r-critical 0.3, and each variable had a reliability coefficient (Alpha-Cronbach) greater than 0, 7. So, the items in the questionnaire were valid and reliable in measuring the variables.

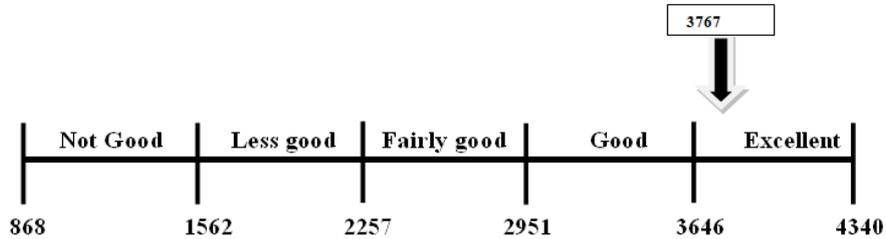
RESULTS AND DISCUSSION

In knowledge management variable with 20 items of statements and 62 people of respondents, a total score of 5176 was obtained. So that the description of knowledge management obtained is as follows.



Based on the continuum line about knowledge management, it can be seen that the respondent's response to knowledge management at PT.Sky Pacific Indonesia was considered good.

On the human resource development variable with 14 items of statements and 62 people of respondents, a total score of 3767 was obtained. So that the description of the



Based on the continuum line on human resource development, it can be seen that the respondent's response to human resource development at PT.Sky Pacific Indonesia was considered excellent.

On the employee performance variable with 17 items of statements and 62 people of respondents, a total score of 4581 was obtained. So that the description of the employee performance obtained is as follows.



Based on the continuum line about employee performance, it can be seen that the respondent's response about the performance of employees at PT.Sky Pacific Indonesia was considered excellent.

Verification analysis is an analysis of model and evidence to find the truth from the hypotheses proposed. In this study, verification analysis aimed to find out the results of the research related to the effect of knowledge management and human resource development on employee performance at PT. Sky Pacific Indonesia. The method used in this verification analysis was path analysis. Before the verification test with path analysis was carried out, the normality test was done first using the Kolmogorov-Smirnov method with the purpose to find out whether the data were normally distributed or not. The p-value obtained from the normality test was greater than alpha ($0.413 > 0.05$), it can be concluded that the data were normally distributed, so path analysis could be conducted.

Below is the path equation in this study:

$$Y = \rho_{yx1}X_1 + \rho_{yx2}X_2 + \varepsilon$$

Where: X_1 = knowledge management; X_2 = human resource development; Y = employee performance.

Based on the results of calculations with path analysis, the path equation obtained is as follows:

$$Y = 0,296*X_1 + 0,519*X_2$$

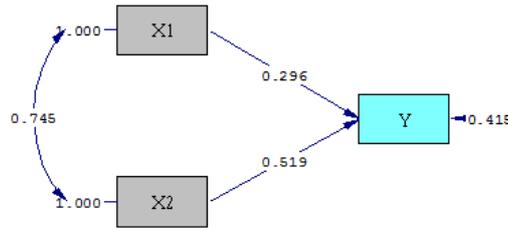


Figure 3 – The Path Chart of The Effect of Knowledge Management and Human Resource Development to Employee Performance

The table that shows the results of the first hypothesis testing is presented below:

Table 5 – Test results of The Relationship of Knowledge Management and Human Resource Development

Correlation coefficient	T_{count}	t_{table} (db: 60)	p -value	H_0	H_1
0.745	8.651	2,000	0,000	Rejected	Accepted

Based on the test results in the table above, it can be seen that the t_{count} value obtained was 8,651 and the p -value was 0,000. Because t_{count} (8,651) > t_{table} (2,000) and p -value (0,000) < 0,05 then it was decided that H_0 was rejected and H_1 was accepted. Therefore, there is a significant relationship between knowledge management and human resource development.

The table that shows the results of the second hypothesis testing is presented below:

Table 6 – Test results of The Effect of Knowledge Management on Employee Performance

Path coefficient	t_{count}	t_{table} (db: 59)	p -value	H_0	H_1
0,296	2,350	2,001	0,022	Rejected	Accepted

Based on the test results in the table above, it can be seen that the t_{count} value of knowledge management variable was 2,350 and the p -value was 0,022. Because t_{count} 2,350 > t_{table} 2,001 and p -value (0,022) < 0,05 then it was decided that H_0 was rejected and H_1 was accepted. Therefore, knowledge management has a significant effect on employee performance.

The table that shows the results of the third hypothesis testing is presented below:

Table 7 – Test results of The Effect of Human Resource Development on Employee Performance

Path coefficient	t_{count}	t_{table} (db: 59)	p -value	H_0	H_1
0,519	4,124	2,001	0,000	Rejected	Accepted

Based on the test results in the table above, it can be seen that the t_{count} value of Human Resource Development variable was 4,124 and the p -value was 0,000. Because t_{count} 4,124 > t_{table} 2,001 and p -value (0,000) < 0,05 then it was decided that H_0 was rejected and H_1 was accepted. Therefore, Human Resource Development has a significant effect on employee performance.

The table that shows the results of the fourth hypothesis testing is presented below:

Table 8 – Test results of The Effect of Knowledge Management and Human Resource Development on Employee Performance

F_{count}	F_{table} (db: 59)	p -value	H_0	H_1
41,521	3,153	0,000	Rejected	Accepted

Based on the test results in the table above, it can be seen that the F_{count} value was 41,521 and the p -value was 0,000. Because F_{count} 41,521 > F_{table} 3,153 and p -value (0,000) < 0,05 then it was decided that H_0 was rejected and H_1 was accepted. Therefore, Knowledge

Management and Human Resource Development have a significant effect on employee performance.

CONCLUSION

After analysis and discussion in the previous chapter, conclusions can be taken as follows:

1. Knowledge management has a significant effect on employee performance at PT.Sky Pacific Indonesia, with a direct influence of 8.76%, and indirect effects through Human Resource Development by 11.44%. Furthermore, the total influence of Knowledge Management on Employee Performance is 20.20%, it means that 20.20% of changes in the performance of employees of PT Pacific Pacific Indonesia are influenced by Knowledge Management.

2. Development of human resources has a significant effect on the performance of employees at PT.Sky Pacific Indonesia, with a direct influence of 26.94%, and indirect influence through Knowledge Management of 11.44%. Furthermore, the total influence of Knowledge Management on Employee Performance is 38.38%, meaning that 38.38% of the changes that occur in the performance of employees of PT Pacific Pacific Indonesia are influenced by the application of Human Resource Development.

3. Knowledge management and human resource development have a significant effect on the performance of employees at PT.Sky Pacific Indonesia, with a total influence of 58.58%, while the rest or other variables not examined that affect Employee Performance are 41.42%. this means that 58.58% improvement on employee performance at PT. Sky Pacific Indonesia can be explained by Knowledge Management and Human Resource Development variables, while the remaining 41.42% is influenced by other factors not examined.

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ANALYSIS OF FACTORS AFFECTING RICE IMPORTS IN INDONESIA

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ABSTRACT

Indonesia is an agricultural country with a large portion of its income derived from rice farming. However, Indonesia still imports rice from abroad, even exceeding 1 million tons in 2016. The purpose of this study analyzes the variables of domestic rice productivity, domestic rice demand, domestic rice prices, foreign rice prices and foreign exchange rates that affect Indonesian imports. The analytical method used is an explanatory method to test the hypothesis of a simultaneous relationship between the variables studied. The model in this study uses simultaneous models with two stage least square (2SLS). The results showed that domestic demand for rice and domestic rice prices had a positive effect on imports. Meanwhile, domestic rice productivity, prices of foreign rice and foreign exchange rates have a negative effect on rice imports.

KEY WORDS

Imports, rice, trend, rice productivity.

Food is the main need for humans. Food is one of the needs that must be fulfilled so that one's survival can be maintained. Amang (1995) states that one of the foods that must be fulfilled by humans; especially the population of Indonesia is rice. From the consumer side, the importance of rice is undeniable, namely as the main staple food of the country with a participation rate of rice reaching around 95%, meaning that 95% of households in Indonesia consumed rice, this participation rate certainly varies from region to region. The need for rice consumption in Indonesia is very high so it is necessary to pay attention to sufficient rice commodities.

The condition of rice consumption in Indonesia increases along with population growth. The need for rice is not only consumed as food but also as raw material for food and non-food industries, seed consumption and other consumption. Not only as food consumption increases, but rice consumption needs as raw material for food and non-food industries also increase. The increase in domestic rice consumption in addition to the rate of population growth is also due to the shifting of the Indonesian population which was not a consumer of rice into rice consumers. However, as seen in the growth rate of domestic rice consumption each decade has decreased, this shows a shift in consumer tastes from rice to commodities that are more diverse along with the increase in the welfare of the Indonesian population (Kusmana 2017).

In order to meet the consumption needs of rice in Indonesia, various efforts have been made to increase rice production. Achieving sufficient national rice production is very important as one of the factors that influence the realization of national food security. Many programs are discussed by the government to meet food security, especially rice. One of the government's discourses in rice production is giving counseling to farmers about the SRI (System Rice Intensification) planting system. SRI is an innovative rice cultivation technique to increase rice production, with this system it is expected that rice production will increase so that it can meet the food needs of the Indonesian people. Efforts that have been made up to now have been able to increase rice production to 80 million tons in 2018. Even with the increasingly narrow area of agricultural land does not reduce the amount of rice production. This proves that the efforts that have been made are able to increase rice productivity per hectare (Sato, 2006).

Based on the explanation above, Indonesia has succeeded in implementing a discourse that can increase rice production successfully. The supply of Indonesian rice has

increased from year to year. This can be indicated the success of the country of Indonesia as a developing country. However, aside from the above facts, the government continues to increase the amount of rice imports.

Table 1 – Indonesian Rice Imports for 2013-2017

Year	Import of Rice (Ton)	Growth Ratio (%/year)
2013	472.664	-
2014	844.163	33,64
2015	861.601	22,15
2016	1.283.178	28,36
2017	296.117	(8,93)

Data source: Indonesian Statistics 2018 (processed).

It can be seen that rice imports in Indonesia tend to increase from 2013 to 2016. This is very contradictory because domestic production has increased which should be able to cope with domestic rice consumption needs. It can be concluded that the higher rice production in Indonesia does not determine the total volume of rice imports in Indonesia in aggregate. Even the volume of Indonesia's rice imports increased along with the increase in rice production. Based on this reality, the authors consider it to examine more deeply. So from that the author wants to do a research entitled "Factors That Affect Imports of Rice in Indonesia".

The purpose of this study is to determine the factors that influence rice imports in Indonesia.

METHODS OF RESEARCH

Determining the place of research is the country of Indonesia with consideration in aggregate. This research is a time series data in annual form. The time period used in this study began from 2003-2017. The type of data used in this study is categorized as secondary data in the form of time series obtained from several sources by retrieving existing statistical data and other related and necessary documents.

To analyze the factors that influence rice imports in Indonesia in this study using the econometric model by building a system of simultaneous equations. The simultaneous equation model is an equation that has the characteristics of an endogenous variable (dependent variable) in an equation to be an exogenous variable (independent variable) in the other equation system. The common form of simultaneous models with k endogenous variables and m exogenous variables are as follows:

$$y_1 = \beta_{12}y_2 + \dots + \beta_{1k}y_k + \delta_{11}x_1 + \dots + \delta_{1m}x_m + e_1 \quad (1)$$

$$y_2 = \beta_{21}y_1 + \dots + \beta_{2k}y_k + \delta_{21}x_1 + \dots + \delta_{2m}x_m + e_2 \quad (2)$$

$$y_k = \beta_{k1}y_1 + \beta_{k2}y_2 + \dots + \beta_{kk-1}y_{k-1} + \delta_{k1}x_1 + \dots + \delta_{km}x_m + e_k \quad (3)$$

Where: y_1 , y_2 and y_k = endogenous variables (where, k = number of endogenous variables); $x_1 - x_m$ = exogenous variable (where, m = number of exogenous variables); β = coefficient of endogenous variable; δ = coefficient of exogenous variable, and e = residual in the equation.

Based on the simultaneous formulation model above, it can be made the following factors that affect imports:

$$IMBI_t = a_0 + a_1PDN_t + a_2DBDN_t + a_3HBDN_t + a_4HBLN_t + a_5NTK_t + U_1t \quad (4)$$

$$DBDN_t = b_0 + b_1IMBI_t + b_2HBDN_t + b_3INC_t + b_4JPI_t + U_2t \quad (5)$$

$$HBDN_t = c_0 + c_1IMBI_t + c_2DBDN_t + c_3PPDN_t + c_4SBI_t + U_3t \quad (6)$$

Where: IMBI = Indonesian rice imports (tons); PDN = domestic rice productivity (kw/ha); DBDN = demand for domestic rice (tons); HBDN = domestic rice price (Rp/Kg); HBLN = foreign rice price (\$/MT); NTK = foreign currency exchange rate against rupiah (Rp/\$); INC = per capita income of the Indonesian population (Rp); JPI = total population of

Indonesia (soul); PPDN = domestic rice production (tons); SBI = Indonesian rice stock (tons); U = annoying variable; t = period 2002 – 2016.

From the above structural equation it is known that the endogenous variable (dependent variable) is IMBI, DBDN and HBDN. Whereas the exogenous variables (independent variables) are PDN, HBLN, NTK, INC, JPI, PPDN and SBI.

The simultaneous equation system that was built and developed in this study was allegedly using the Two-stage Least Squares (2SLS) method, because this method can overcome simultaneous biases. The 2SLS method can be used well in the model that is over identified and exactly identified. Testing the data in this study using the application of Statistics and Data (STATA).

RESULTS AND DISCUSSION

The decision to import rice in Indonesia is influenced by several factors. The following is the test result of the rice import equation using the STATA application.

Table 2 – Results of Analysis of Factors Affecting Rice Imports in Indonesia

Equation	R-sq	F-Stat	P-Value
IMBI	0.7025	3.30	0.0176
Variable	Coefficient	t-count	P-Value
PDN	-528663	-1,80	0,083
DBDN	0.3189964	1,09	0,285
HBDN	241,5983	0,53	0,603
HBLN	-2248,446	-1,19	0,224
NTK	-372,4697	-1,82	0,079
Constants	0,00017	2,55	0,016

The test results can be included in equation (4). The following is the rice import equation in Indonesia:

$$IMBI_t = 0,00017 - 528663PDN_t + 0.3189964DBDN_t + 241,5983HBDN_t - 2248,446HBLN_t - 372,4697NTK_t + U1_t$$

Domestic rice productivity variables, prices of foreign rice and foreign exchange rates have a negative effect on rice imports. While the demand for domestic rice and domestic rice prices have a positive effect on rice imports. Based on the P-Value which has a significant effect on rice imports, it is domestic rice productivity and foreign exchange rates.

The demand for rice in Indonesia is quite high considering that rice is one of the staple foods of the Indonesian population. In this study it is estimated that the factors that influence the demand for domestic rice (DBDN) are rice imports in Indonesia (IMBI), domestic rice prices (HBDN), Indonesian income per capita (INC) and Indonesia's population (JPI). The following is the result of testing the demand model for domestic rice using the STATA application.

Table 3 – Results of Analysis of Factors Affecting Rice Demand in Indonesia

Equation	R-sq	F-Stat	P-Value
DBDN	0,9618	64,60	0,0000
Variable	Coefficient	t-count	P-Value
IMBI	-0,8143945	-0,95	0,384
HBDN	4089,437	1,37	0,181
INC	0,5350132	0,85	0,404
JPI	-842,701	-1,67	0,106
Constants	0,00197	1,93	0,064

The test results can be included in equation (5). The following is the rice import equation in Indonesia:

$$DBDN_t = 0,00197 - 0,8143945IMBI_t + 4089,437HBDN_t + 0,5350132INC_t - 842,701JPI_t + U2_t$$

The rice import variable in Indonesia and the population of Indonesia have a negative effect on domestic rice demand. While domestic rice prices and per capita income have a positive effect on domestic rice demand. Based on the P-Value which has a significant effect on the demand for rice, it is the price of domestic rice and the population of Indonesia.

Price is an important thing in the transaction process. The following is the analysis of testing the domestic rice price model using the STATA application.

Table 4 – Results of Analysis of Factors Affecting Rice Prices in Indonesia

Equation	R-sq	F-Stat	P-Value
HBDN	0,9908	268,84	0,0000
Variable	Coefficient	t-count	P-value
IMBI	0,0014032	3,21	0,003
DBDN	-0,0012277	-2,51	0,018
PPDN	0,0011065	3,43	0,002
SBI	-0,0002276	-1,34	0,190
Constants	-13946,61	-17,02	0,000

The test results can be included in equation (6) The following is the equation for domestic rice prices:

$$\text{HBDNt} = -13946.61 + 0.0014032\text{IMBI}t - 0.0012277\text{DBDN}t + 0.0011065\text{PPDN}t - 0,0002276\text{SBI}t + U3t$$

Variable demand for domestic rice and Indonesian rice stocks have a negative effect on rice prices. Whereas rice imports and domestic rice production have a positive effect on rice imports. Based on P-Value, all variables have a significant effect on domestic rice prices.

Based on the results of the analysis above explained some points about rice imports in Indonesia. In table 2 it can be seen that the rice productivity variable has the largest coefficient value in the rice import equation. This shows that rice productivity has an ~~important~~ role for the government in making decisions to import rice. In conditions of diminishing land area it does not make productivity decrease. If in the future Indonesia is able to continue to increase rice productivity, then Indonesia does not need to be a rice importing country or even Indonesia will be self-sufficient in food. Efforts that have been made include intensive counseling to farmers, introduction of methods of planting such as Jajar Legowo and SRI (System of Rice Intensification) and the provision of appropriate and balanced fertilizers. Considering rice productivity has a significant relationship with rice imports, it is expected that the government will increase the intensification of agricultural land so that productivity increases.

Based on the comparison of domestic rice prices and foreign rice prices, it can be concluded that the Indonesian state is in dire need of rice imports. Increasing the price of domestic rice by Rp.100 / kg will result in an increase in imports of 24,159 tons. While the increase in the price of foreign rice by Rp.100 / kg only reduced rice imports by 1.6 kg. This shows the large number of Indonesians who need imported rice due to the high price of domestic rice. Although there is already the highest retail price setting by the government, there are still many Indonesians who choose imported rice that is relatively cheaper. This is of course bad news for the development of the country of Indonesia. There needs to be a change in the mindset of Indonesian consumers to prefer domestic rice.

For rice prices, it is still difficult to see the causes of price fluctuations. Based on table 4, there is a significant relationship between rice imports, demand for rice, rice production and rice stock against domestic rice prices. But the magnitude of the effect is very little. This is due to government policy regarding the lowest prices and the highest prices of food commodities in Indonesia, especially the commodity of rice.

Based on BPS data, the demand for rice in Indonesia continues to increase every year. However, rice consumption in Indonesia has decreased in 2017. This is evidenced by the data in table 3 which states that Indonesia's population has a negative effect on domestic rice demand. The reduced level of rice consumption in Indonesia is influenced by the existence of a food diversification program by the government with the aim of changing

people's mindsets in consuming rice. The population of Indonesia, which used to only consume rice as a staple food, has now begun to consume other commodities such as corn, sweet potatoes, nuts and others. The existence of the program is expected to reduce the demand for rice in the country so that Indonesia does not need to import rice.

CONCLUSION

Factors of domestic rice productivity and foreign exchange rates have a significant effect on rice imports in Indonesia. Whereas domestic rice prices, foreign rice prices and domestic rice demand do not significantly affect rice imports in Indonesia. Domestic rice demand and domestic rice prices have a positive effect on imports. Meanwhile, domestic rice productivity, foreign rice prices and foreign exchange rates have a negative effect.

It is hoped that the government will continue to improve agricultural policies, especially the commodity of rice.

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BANKING AND FINANCIAL TECHNOLOGY (FINTECH) ISLAMIC INTEGRATION WITH COLLABORATIVE MODELS

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ABSTRACT

This research aims to formulate appropriate collaboration models for Islamic banking and fintech integration. The research was carried out by descriptive analysis method. The tools used at this study consist of EFE (External Factors Evaluation) analysis, IFE (Internal Factors Evaluation) analysis, IE (Internal External) matrix analysis, SWOT matrix analysis, and ANP analysis. The results of the analysis show Islamic banking and fintech external strategic factors include 5 opportunities and 5 threats. The Islamic banking internal strategic factors include 6 strengths and 4 weaknesses. In this study Islamic banking and fintech obtained EFE 3.11 and IFE 3.00. The position of Islamic banking and fintech in the IE matrix is cell IV which means grow and build with a choice of intensive and integrative strategies. The results of the SWOT analysis provide show Islamic banking and fintech with several strategies that can be implemented, namely in the form of 2 SO strategies, 2 ST strategies, 3 WO strategies, and 1 WT strategy. The choice of strategy is then determined by the priorities of each strategy and alternative strategies that will be used for Islamic banking and fintech collaboration.

KEY WORDS

Banking, Fintech, information technology, collaboration.

As information technology develops and is supported by rapid internet penetration, a number of digital financial services have emerged that make it easier for people to make transactions and obtain financing. This digital financial service is called financial technology which is then abbreviated as fintech. Distribution of Fintech companies in Indonesia in 2018 can be seen in Figure 1 based on the Fintech News Singapore survey. Indonesians use more payment-based fintech services with a percentage of 38% and followed by loan services of 31%.

This shows that the availability of fintech in Indonesia is able to help the government in providing wider and more efficient payment and loan services. The total value of investment in fintech in Indonesia in 2017 reached 2.29 trillion rupiah according to Daily Social and Statistics data on the Fintech Indonesia Report (2018). The World Economic Forum (2015) report in the Fintech Indonesia article predicts that Indonesia will become one of the largest digital markets in Southeast Asia by 2020. This prediction shows the opportunity for the development of digital financial services in Indonesia in the near future to meet financial service needs for society.

Application of financial technology to improve the efficiency of operational activities and the quality of bank services to its customers. This is due to utilization Financial technology is in line with the growing needs of the community will be online-based financial services and use of internet media for data access digital. This will increase the existence of more Islamic banking be competitive in financial markets and also help accelerate financing processes in Islamic banks with applications that are easy, efficient and effective with access wider. The financing process is faster and measurable by mitigating risks that can done early with the fintech system.

Based on this, it becomes an opportunity for Islamic banking to use of fintech. This opportunity is supported by Islamic bank products can meet all community needs. From the problem of share growth Islamic banking market, product financing products that have characteristics from the focus of Islamic banking on the existence of national and

international markets. Various developments in fintech industry, regulator recognition, and potential a broad community of financial access, allows for a strategy that connects Islamic banking and fintech banking.

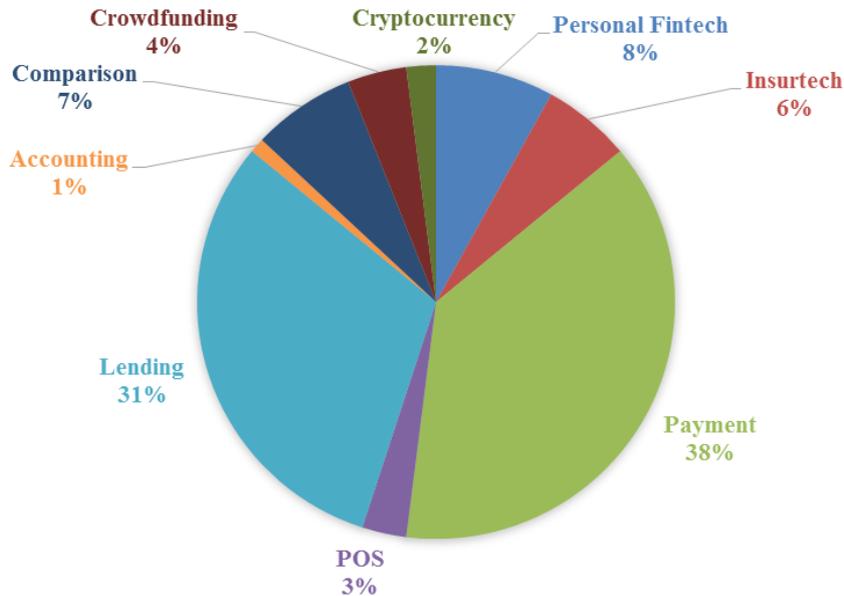


Figure 1 – Fintech Distribution in Indonesia in 2018

The collaboration model between Islamic banking and fintech is, among others, when there are Islamic banking customers who will apply for loan funds however has not met the requirements of Islamic banking, Islamic banking will offering fintech loan products that have easier requirements compared to Islamic banking, and for these services, Islamic banks will get compensation or profit sharing from fintech who works with him. Based on the background and formulation of the problem above, the purpose of this study is:

1. Identifying strategic issues between Islamic banking and fintech;
2. Analyzing the formulation of appropriate strategies for banking integration and fintech Islamic;
3. Forming the right collaboration model for banking integration and fintech Islamic.

METHODS OF RESEARCH

This research was conducted for two months from April to May 2019. Data collection locations, interviews, and filling out questionnaires were conducted on Islamic banking (BNI Syariah and BSM), partners (Kerjasama.com, Ammana.id), and regulators (OJK) in Jakarta. Observation and study of literature is the first step that needs to be done is to make an initial observation to get an overview of the actual conditions of the object to be studied. Quantitative analysis is also used in weighting using pairwise comparison in the ANP method. Strategy priorities are determined by the ANP method. Sources of data use primary data and secondary data. Data collection techniques through interviews and questionnaires are carried out by involving the CEO and manager of the relevant divisions / departments. Secondary data obtained through literature studies / literature studies relating to banking and Islamic fintech were processed by researchers. The sampling technique is done by purposive sampling technique or judgment sampling. The main criteria that make consideration are internal parties related to Islamic banking and fintech.

Survey respondents were determined by purposive sampling, which consisted of internal and external respondents. The internal part who is the respondent is a member of the Board of Directors Islamic banking. While the external part consists a member of the Board of Directors Islamic fintech. To get an initial picture of strategic factors, focus group discussions were conducted with the general managers. Then determine the strategic factors

of the external and internal business environment. Examination of the company's external and internal environment is very important in the strategy planning process (Arslandere and Ocal 2018). The framework for analyzing the external environment is using PESTEL (Political, Economy, Social, Technology, Environment, Legal) (Sammut-Bonnici and Galea 2015).

After that the weighting and rating of the strategic factors is done by using a questionnaire. Weighting and rating of strategic factors produces EFE and IFE matrices which are then mapped into the Internal-External (IE) matrix. The External Factors Evaluation (EFE) and Internal Factors Evaluation (IFE) matrices are the initial input matrices that summarize the synopsis of major environmental opportunities and threats and the company's main strengths and weaknesses, and how they affect the company (Capps and Glissmayer 2012). The combined values of EFE and IFE are mapped into the Internal-External matrix which is divided into 9 cells (David and David 2017). The use of this IE matrix is to obtain business strategies at the corporate level (Winardi 2014).

The SWOT matrix is used to develop selected grand strategies from the IE matrix into several business strategies (Budiman et al. 2018). After getting the weight value from each perspective, the questionnaire made to determine the priority of the strategy with the ANP method, assisted with supporting application, namely super decision 2.0 which is an application program of ANP theory (Saaty 2003). In the ANP method, the data used is data primary obtained from the results of interviews (in-depth interviews) with experts, practitioners, and regulators who have an understanding of the issues discussed. Followed by filling out questionnaires with respondents. Data is ready for processing in ANP are the variables of respondents' assessment of the problem being the object research on a numerical scale (Suhendi 2012).

The questions in the ANP questionnaire are pair comparisons (pairwise comparison) between elements in the cluster to find out which of the two greater influence (more dominant) and how much the difference is seen from one side. According to Saaty (1996) a numerical scale of 1-9 is used in giving opinion scores based on the level of accuracy indicated by the value Root Mean Square (RMS) and Median Absolute Deviation (MAD).

RESULTS OF STUDY

Banks are one of the financial institutions that have an important role as financial intermediaries in the economy of a country. Aside from being a place to store funds, the bank is also a place to borrow funds. At present the bank is an institution that cannot be separated from people's lives. Among other functions banks in the modern world are as providers of electronic shopping payments, telephone bills, electricity bills, and other payments.

Islamic banks are banks that are based on Islamic economic systems. Islamic banks were initially developed as a response from economic groups and Muslim banking practitioners who tried to accommodate the pressure of various parties who wanted financial transaction services to be carried out in line with moral values and Islamic sharia principles. According to Law Number 10 Year 1998 Article 1 Paragraph 13 concerning banking states that what is meant by sharia principles is an agreement based on Islamic law between banks and other parties for depositing funds and / or financing business activities, or other activities declared in accordance with sharia, between other financing is based on the principle of profit sharing, financing based on equity participation, the principle of buying and selling goods by obtaining profits, or financing capital goods based on the principle of pure rent without choice. Or with the transfer of ownership of goods rented from the bank by another party.

Islamic finance in Indonesia has grown more than two decades since the operation of Bank Muamalat Indonesia, as the first Islamic bank in Indonesia. The development of Islamic finance has resulted in various achievements, from increasingly increasing products and services, to increasing infrastructure that supports sharia finance. Even in the global market, Indonesia is among the top ten countries that have the largest Islamic financial index in the

world. However, the growth of Islamic finance has not been able to keep up with conventional financial growth.

The emergence of financial technology (fintech) is one proof of the development of digital-based technology which is a new innovation and has an impact on all economic activities. Fintech is a business that focuses on providing financial services using modern software and technology. The development of conventional fintech was followed by the development of sharia-based fintech. There is a difference between Islamic fintech and conventional fintech. Because the suitability of the transactions carried out must be in accordance with sharia rules both in harmony and conditions in the contract. The emergence of sharia fintech is in line with changes in increasingly advanced technology so that human lifestyles also change according to the times.

Peer to peer lending (P2P) is an online borrowing and borrowing platform. Through an online platform transparency and information disclosure make access to capital easier and affordable. Borrowers with limited access get an easy process and an affordable rate. On the other hand, fund owners can obtain investment alternatives that are more profitable than conventional investment instruments. Alamisharia.co.id, Ammana.id, and Kapitalboost.com are sharia fintech services that use the principle of P2P.

Crowd funding is a fundraising process to start a business whose source of funds comes from a large number of people. Collection of funds with a certain time limit, for example 30 to 60 days, and the process is done through an online platform. Community funding is an initiative to raise money for a new project proposed by someone by collecting small to medium sized investments. Examples of sharia fintech in Indonesia engaged in crowdfunding include Collaboration.com and Ethiscrowd.com.

Electronic payments as all payments initiated, processed and received electronically. E-Payment requests have arisen because of the presence of online stores (Hartmann 2006). The first electronic payment solution, for example online banking, was strongly inspired by predefined account-based bank transfers. Since then there have been innovative and easy to use solutions and are more in line with the needs of traders and customers (Dahlberg et al. 2007). The electronic payment process includes the transfer of a certain amount of money from the payer to the recipient of payment through an independent electronic payment mechanism (Weir 2006).

External environment analysis aims to identify external strategic factors. This research uses PESTLE analysis (Politics, Economy, Social, Technology, Legal, Environment). Identification of external strategic factors is carried out by direct interviews with company respondents, as well as additional information obtained from the literature. Using the PESTLE analysis framework, there were 5 factors including opportunities and 5 factors which included threats to Islamic banking and fintech (Table 1). The EFE calculation of islamic fintech produces a value 3.110. This figure shows that Islamic fintech's external factors have good potential for business.

Table 1 – External Factors Evaluation (EFE) Matrix

Factors	Weight (a)	Rating (b)	Skor (c=a*b)	Ranking
OPPORTUNITIES				
1. Technological advancements facilitate product development	0.118	4	0.472	1
2. The Islamic market is still very wide open	0.109	4	0.436	2
3. Changes in the economic situation and pricing with conventional banks	0.126	3	0.378	4
4. Increased public awareness to practice according to sharia	0.097	4	0.388	3
5. There is excess liquidity in banks in the Middle East	0.079	3	0.237	5
THREATS				
1. A security and political situation that does not support foreign investment to develop	0.116	2	0.232	3
2. Geographical conditions determine product development	0.092	1	0.092	5
3. The framework and instruments of sharia regulations are incomplete	0.103	4	0.412	1
4. There are still differences of opinion among scholars regarding sharia principles	0.085	2	0.170	4
5. The difficulty of changing people's mindsets	0.072	4	0.288	2
Total (A+B)	1		3.110	

The internal environment for Islamic banking is covering factors within the company that are relevant and influential for the company's business. By using the company's functional analysis framework in the form of marketing, operational, human and financial resources, six factors were included including strengths and 4 factors including weaknesses in Islamic banking (Table 2). The IFE calculation of islamic fintech produces a value 3.000. This figure shows that Islamic banking's internal factors have good potential to be optimized to choose a more aggressive business strategy to encourage growth.

Table 2 – Internal Factors Evaluation (IFE) Matrix

Factors	Weight	Rating	Skor	Ranking
	(a)	(b)	(c=a*b)	
STRENGTHS				
1. Human resources that uphold management policies	0.119	4	0.476	3
2. A sense of togetherness and mutual belonging between existing human resources	0.113	4	0.452	4
3. There is control over quality human resources	0.119	4	0.476	2
4. Strong capital structure for product development	0.088	3	0.264	6
5. A more equitable system of sharia	0.107	4	0.428	5
6. There are other control institutions such as the sharia supervisory board	0.125	4	0.500	1
WEAKNESSES				
1. Product codification and regulatory standards are still minimal	0.080	1	0.080	4
2. Sharia operational efficiency is still not optimal	0.071	2	0.142	1
3. Sharia HR does not fully understand the sharia business	0.108	1	0.108	3
4. Limitations on sharia marketing networks	0.060	2	0.120	2
Total (A+B)	1		3.000	

Merging EFE values and IFE banking values and sharia fintech are plotted in the IE matrix resulting in a value (3.110, 3.000) in quadrant IV (Figure 2). Quadrant position I illustrates that the company is currently in growth and build stage with an appropriate grand strategy that is intensive (market penetration, market development, product development) or integrative (forward integration, backward integration, horizontal integration). This position affects the choice of strategies arranged in the next stage.

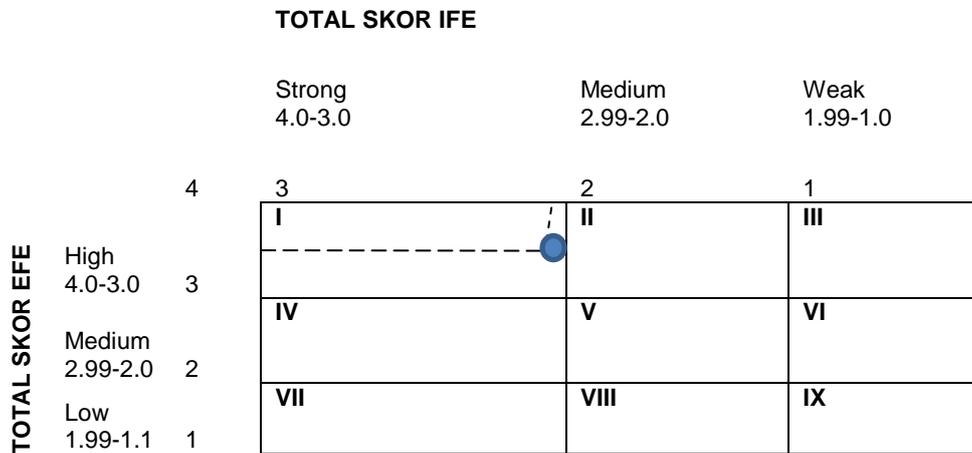


Figure 2 – Company position on the Internal-External matrix

After obtaining the grand strategy from the IE matrix, then the strategy analysis was carried out using the SWOT matrix. Strategy selection is mainly focused on S-O (Strengths-Opportunities) strategy, which is a strategy that prioritizes the use of strength owned by the company to optimally utilize business opportunities for companies. Even so, Islamic banking and fintech continue to consider several W-O, S-T, and W-T strategies that are really needed for companies to be able to increase business growth.

After determining the rating with EFE and IFE matrices from each SWOT perspective, the target strategy and the next step are weighting feedback and determining the priority of strategies from each element of the IE matrix results and alternative strategies that will be used for sharia banking and fintech collaboration using ANP. In determining alternative

strategic priorities used by combining the opinions of five respondents or expert experts consisting of internal companies, namely two CEOs of sharia fintech, two general managers of sharia banking, and one respondent or other experts, namely regulators from external companies that have the capacity and deep understanding of Islamic banking and fintech.

Table 3 – SWOT Matrix for Islamic banking and fintech business development

Internal Strengths Weaknesses	
1. Control institutions	1. System not optimal
2. Network limitations	
2. HR control	3. HR is not yet competent
3. HR has upheld management policies	4. Minimal regulatory standards
4. Sense of togetherness	
5. Sharia system is more just	
6. Strong capital	

External	Opportunities	SO Strategies	WO Strategies
	1. Technology advances	1. Optimization of data access Islamic banking (S2, S3, O1, O2, O3)	1. Building digital capabilities (W1, W2, O1, O3)
	2. Wide Islamic market	2. Increasing the availability and diversity of Islamic financial products (S5, O1, O2, O3)	2. Utilization of fintech in order to expand access to Islamic finance (W2, O1, O2, O3)
	3. Increasing public awareness		3. Routine training system (W3, O1)
	4. Economic changes		
	5. Excess liquidity		

External	Threats	ST Strategies	WT Strategies
	1. Incomplete regulations	1. More competitive and efficient institutional capacity building (S1, S2, S3, T1, T2)	1. Telecommunication infrastructure improvements (W1, W2, T2)
	2. Difficult change mindset	2. Enhancing banking customer experience with the fintech platform (S3, T2)	
	3. Security and political situations		
	4. Dissent		
	5. Geographical conditions		

In ANP there are two parts, namely part of the network consisting of criteria and subcriteria and the second part is the influence between elements and clusters. This network has three clusters, namely the SWOT perspective, strategic objectives, and alternative strategies. In each cluster there are several elements in it, in the SWOT perspective there are four elements, four elemental strategy objectives, and four alternative strategies. The general ANP framework can be seen in Figure 3.

Based on the ANP results, determining the priority of strategies in banking collaboration and sharia fintech which is processed with super decision software can be seen in Table 12 where the greater the weight produced the higher the priority level of the strategy. In the perspective cluster, the main priority in the context of banking collaboration

and sharia fintech is the power perspective with a weight of 0.3654. The second priority is the opportunity perspective with a weight of 0.3171. The threat perspective is the third most important priority in the perspective cluster with a weight of 0.2018. The last priority in the perspective cluster is weakness with a weight of 0.1156.

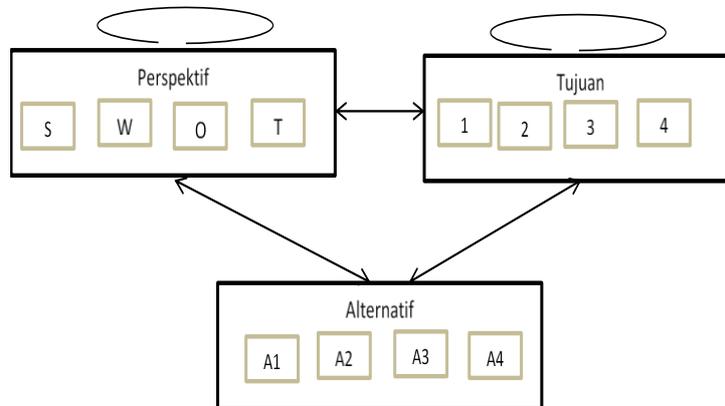


Figure 3 – Sharia banking and fintech collaboration strategy framework with ANP

In the cluster strategy the target element which is the top priority is the design of sharia regulations by the regulator of 0.3983. The second priority element is increasing the sharia marketing network with a weight of 0.2081. Improving the quality of competent human resources is an element of the strategic target cluster that the company wants to achieve with a weight of 0.2054. The last priority is to increase the volume of product sales in either banking or Islamic fintech with a weight of 0.1880.

ANP results on alternative strategies show that Islamic banking and fintech must synergize to accelerate sharia business growth with a weight of 0.4178. The utilization of the Islamic fintech system carried out by Islamic banking to reach customers is the second priority in the alternative strategy cluster with a weight of 0.2859. The third priority that becomes an alternative to banking collaboration and sharia fintech strategy is that Islamic banks build digital capabilities with the Islamic fintech platform with a weight of 0.1700. The routine training system is the last priority in alternative strategies with a weight of 0.1251.

MANAGERIAL IMPLICATIONS

The managerial implications of this research are manifested in a banking collaboration model and sharia fintech as a result of the SWOT matrix. The collaboration model is prioritized through ANP analysis in Figure 8. To obtain the right collaboration model for Islamic banking and fintech. The collaboration model was built based on 4 alternative strategies resulting from the SWOT matrix. The order of priority strategies to be carried out by the company is determined based on the highest weighting value.

Islamic banking and fintech will develop optimally with a collaboration model. Fintech sharia by providing easier and faster financial access. The first collaboration model is Co-Lending, which is the distribution of funds to help capitalize a business that cannot yet be served by Islamic banking. For example, access to small business funding can be transferred to Ammana.id. Ammana.id is a community-based loan distributor.

Co-Marketing collaboration model, which is product marketing. Islamic banks can market products through the fintech platform. For example, when a customer has not met Islamic banking requirements, Islamic banking will offer sharia fintech products. This is because Islamic fintech has requirements that are easier than Islamic banking. And vice versa, when sharia fintech customers meet banking requirements, fintech sharia will offer sharia banking products.

The Co-Sharing collaboration model is sharing profits and losses. For example Kendang. A fintech platform engaged in Islamic investment that connects investors with farmers in the area. Kendang.in uses a profit sharing system.

Co-Caring and Co-Charity collaboration model that is caring. Islamic banking can use fintech sharia in the implementation of corporate social responsibility with the aim of providing added value to all stakeholders including internal companies to support the company's growth. The implementation of Islamic banking collaborates with online sharia-based fintech based donations and fundraising.

CONCLUSION

In this study the conclusion is the formulation of the answers to the objectives of the study. The conclusions of this study are as follows:

1. Banking and Islamic fintech have the potential to be able to take advantage of opportunities in the financial industry. With internal banking capital and fintech capital as adequate financial services in terms of strength, namely the existence of other control institutions such as DPS, the control of human resources, human resources that uphold management policies, a fairer system, and a strong capital structure for product development. So the opportunity for technological advances in the industrial era 4.0 can be optimized with the right strategies to support the expected business growth.

2. Analysis of IE positions banking and Islamic fintech in quadrant I with a grand strategy grow and build with a choice of intensive and integrative strategies. The focus of the strategy in accordance with these positions is on the S-O (aggressive) strategy with 2 strategies, the W-O (conservative) strategy with 3 strategies, the S-T (competitive) strategy with 2 strategies, and the W-T strategy (defensive) with 1 strategy.

3. With the internal strength of Islamic banking and fintech, all of these strategies can be implemented by management. The banking collaboration model and sharia fintech were analyzed using ANP. Islamic banks and finteches synergize to improve the Islamic finance business.

RECOMMENDATIONS

Determination of sharia banking and fintech collaboration models is made at the corporate level so that to implement it a strategy must be made at the functional level as the development of work programs that have been prepared.

This strategy analysis is based on current conditions by considering the foresight industry for the company's business in the future, so it is advisable for management to periodically evaluate the suitability of the strategy with the situation of the business environment both internally and externally.

To enrich banking related literature and fintech sharia, further research is recommended from various aspects such as external parties (banking users and Islamic fintech) and regulators.

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**THE INFLUENCE OF FIRM CHARACTERISTICS, CORPORATE GOVERNANCE
AND CAPITAL STRUCTURE ON ISLAMICITY DISCLOSURE INDEX: A STUDY
OF COMPANIES LISTED IN JAKARTA ISLAMIC INDEX DURING PERIOD
OF 2012-2016**

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ABSTRACT

The purpose of this study is to examine and explain the effect of Firm Characteristics, Corporate Governance and Capital Structure on the Islamicity Disclosure Index. This research is explanatory research to explain the causal relationship between research variables through hypothesis testing. The method of data analysis uses Generalized Structured Component Analysis (GSCA) analysis. Research findings in general, there are two variables that have a positive and significant effect on the Islamicity Disclosure Index, namely Firm Characteristics and Capital Structure. Corporate Governance variables have a positive and not significant effect on Islamicity Disclosure Index.

KEY WORDS

Firm characteristics, corporate governance, capital structure, Islamicity Disclosure Index.

The Phenomenon of the Islamic Capital Market has experienced rapid development for decades as part of the world financial market. The Islamic Capital Market has been implemented by capitalist countries such as the United States through the Dow Jones Islamic Market Index (DJIMI), the Dow Jones Islamic Average and the Shariah All World Financial Times Stock Exchange (FTSE); in addition, in India there are Bombay Stock Exchange TASI Shariah 50 Index, Republic of Korea Shariah Security Policy International Board Market Index (SPGI BMI) in Korea; S & P Japan 500 Shariah in Japan; Shariah China's Financial Times Stock Exchange (FTSE) in China; SPGI BMI Philippines Shariah in the Philippines and SPGI BMI Singapore Shariah in Singapore, SPGI Hong Kong Shariah in Hong Kong and several other Muslim minority countries (Hakim and Rashidian 2002).

Especially in the Sharia Capital Market in Indonesia, it was initiated by the launch of the Jakarta Islamic Index (JII) in 2000 by the Indonesia Stock Exchange (IDX) in collaboration with PT Danareksa Investment Management. The development of sharia shares included in the Jakarta Islamic Index (JII) continues to increase, this has led to sharia stocks themselves becoming increasingly attractive to investors. This shows that the company needs to improve the quality of corporate reporting, not only based on financial reports but also in terms of its Sharia reporting

The policy of disclosing information openly about the financial condition of this company is very important for public companies. This information disclosure can be used as a tangible manifestation of management transparency and accountability in managing the company to stakeholders. This information disclosure can be used as a consideration for stakeholders in decision making. Sharia Index disclosures are included in the category of voluntary disclosure used by management to increase the credibility of the company.

Many factors can influence the voluntary disclosure of company information, such as that carried out by Talpur, Lizam & Keerio (2018) that found evidence that Firm

Characteristics proxied by company size is a factor that influences in determining the level and quality of voluntary corporate governance disclosure practices. Furthermore, Abeywardana & Panditharathna (2016) in their research found evidence that firm size and age are determinants of the level of voluntary disclosure of company information.

This voluntary disclosure of company information is a positive signal for the company. Signaling Theory (Ross, 1977) suggests that how a company should signal to the public. This signal is in the form of information about what has been done by management. signals can be in the form of promotions or other information that can state that the company has done better corporate governance than other companies.

The application of good corporate governance, company managers will always take appropriate and selfless actions, and can protect corporate stakeholders. According to Drever, signaling theory emphasizes that the reporting company can increase the value of the company through its reporting (Drever et al., 2007). This is in accordance with the Agency Theory (Jensen & Meckling, 1976) and the results of the research by Aburaya (2012), Samaha et al. (2012) and Gao and Kling (2012) who found that good Corporate Governance will further enhance Firm Disclosure to parties outside the company.

Corporate governance is a set of rules that regulate relations between holders, managers of companies, creditors, governments, employees and other internal and external stakeholders who are related to their rights and obligations or in other words a system that controls the company. A good governance mechanism has been believed to be able to encourage companies to consider external costs in their operations, in this case is the company's income policy from outside parties reflected in the Company's Capital Structure.

Problems that arise with regard to funding needs, and the fulfillment of funding needs sourced from within the company have been used all, so there is no other choice but to use funds originating from outside the company, both from debt and by issuing new shares. If the fulfillment of funds from external sources prioritizes debt only, our dependence on external parties will increase and financial risk will increase. Conversely, if we only base on stocks, the cost will be very expensive.

Jensen & Meckling (1976) connects agency cost with debt in the Capital Structure. Agency theory states that in determining the Capital Structure it is also necessary to consider the costs incurred due to differences in interests between the owner and the management of the company. Based on the Capital Structure theory has a positive effect on the possibility of bankruptcy, the value of liquidation, and the reputation of the manager. Capital Structure has a greater effect on the lender, so the cost of debt becomes bigger.

Based on Signaling Theory (Watson & Marston, 2002), Capital Structure also influences the Islamicity Disclosure Index. If the company has a good Capital Structure and so that the company has a good impression, the company will disclose widely to the public regarding its existence. This is evidenced by the study of Craig and Diga (1998) which shows that Capital Structure has a significant and positive effect on Firm Disclosure.

Nguyen et al. (2017) in their study found that there was a positive influence between leverage as measured by the Long-term debt to total asset ratio (LTDTA) and the level of disclosure of environmental accounting information. This indicates that companies with larger amounts of long-term debt tend to have high levels of company disclosure and transparency.

Based on the results of several previous studies and existing theories, this study seeks to develop a more representative model of each variable identified as a variable that has an influence on disclosure of company information. Furthermore, the research aims to examine and explain the effect of Firm Characteristics, Corporate Governance and Capital Structure on the Islamicity Disclosure Index on Companies listed in the Jakarta Islamic Index.

THEORETICAL FRAMEWORK AND HYPOTHESIS

Firm Characteristics are conceptualized differently by various studies depending on the criteria used to define them. However, most studies seem to agree in the position that company characteristics are related to company resources and organizational goals.

Wallace, Naser & Mora (1994) defines Firm Characteristics as factors that distinguish companies. The factors that distinguish these include company size, company age, type of company, multinational or not, liquidity, profitability, leverage, social constraints that are owned, the owner's country of a company, the country where the company is, etc.

Lang & Lungdholm divided Firm Characteristics into three categories (Wallace, Naser, & Mora, 1994), namely:

- Structure-related variables are variables related to the structure, namely the economic condition of the company;
- Performance related variables are variables related to performance based on financial statements so that performance measurement is based on financial performance.
- Market related variables are a lot pointing to aspects of corporate behavior that arise as a result of participating as a member of a collaborative group between companies in an operational environment.

Wallace and Zinkin (2005) define Corporate Governance as "a set of provisions that enable the stockholders by exercising voting power to compel those in operating control of the firm to respect their interests", Manila's Asian Development Bank defines corporate governance as: "A set of rules that define the relationship between shareholders, managers, creditors, the government, employees and internal and external stakeholders in respect to their rights and responsibilities".

Corporate governance explains how the company should be directed and supervised, for example how to determine company goals and monitor performance related to the objectives that have been set. Good corporate governance will give a boost to the board and management to achieve goals, which are the interests of the company and its shareholders (Maier, 2005).

Riyanto (2001) explains that capital structure policy is part of the financing decision which is the main decision in financial management besides investment decisions and dividend decisions or dividend policies. Funding decisions involve decisions concerning the determination of the best funding sources or capital structure. The company's financing decision is one of the financial strategic decisions related to how the obtaining of funds and use of funds.

According to Gitman (2000) Capital Structure is the mix of long-term debt and equity maintained by the firm ". The Capital Structure describes the comparison between long-term debt and own capital used by the company. There are two types of capital according to Gitman, namely debt capital and equity.

The capital structure policy is part of the financing decision. Before discussing more about the theory of capital structure it is better if first understood what is actually meant by the term capital structure. Alwi (1993) states that capital structure is a comparison between long-term debt and own capital used by the company. Campsey & Brigham (1985) introduced the notion of capital structure, namely: "capital structure is a percentage of each type of capital used by firm debt, preferred stock, and common equity".

Hameed et al. (2003) stated that the Islamicity Disclosure Index was developed to help stakeholders, namely shareholders, religious institutions, the government and other relevant parties to evaluate the performance of Islamic financial institutions. This approach basically aims to induce organizations to disclose further information, not only based on disclosure regulatory requirements according to regulatory requirements but based on what they must express. The Islamicity Disclosure Index is intended to examine how well the organization discloses information that might be useful to stakeholders.

The Islamicity Disclosure Index includes voluntary disclosure. Issuers registered in the Jakarta Islamic Index (JII) should be able to fulfill the Islamicity Disclosure Index. Islam has a message that is in line with the concept of corporate social responsibility. This is as concluded Kamla et al. (2006) that: "Islamic principles constitute a love of nature, and of people: the self and others, and awareness of the importance and balance of reasoning for actions to preserve this balance". It can be interpreted that Islamic principles are the love of nature, people (themselves and others) and awareness of the importance of balance and the

need to take action to maintain that balance. The Islamicity Disclosure Index consists of sharia compliance index consisting of 14 items, corporate governance index consists of 35 items and social / environment index consists of 14 items.

Jensen and Meckling (1976) explain agency relations in agency theory that a company is a nexus of contracts between the principal and the agent who manages the use and control of these resources. Messier, et al. (2006) added that the agency relationship resulted in two problems, namely asymmetry information, where management generally had more information about the actual financial position and operating position of the entity than the owner; and conflict of interest due to inequality of objectives, where management (agent) does not always act according to the principal. Efforts to overcome or reduce agency problems will lead to agency costs borne by both the principal and the agent. Jensen and Meckling divided these agency costs into monitoring costs, bonding costs and residual losses. Monitoring costs are costs borne by the principal to monitor agent behavior, namely, to measure, observe, and control agent behavior. Bonding costs are costs borne by the agent to establish and comply with a mechanism that ensures that the agent will act in the interests of the principal. Furthermore, residual loss is a sacrifice in the form of reduced principal prosperity as a result of differences in agent decisions and principal decisions.

Morris (1987) states that the larger the company will have a greater agency cost so that it will reveal broader information to reduce agency costs. This is because the principal in overseeing the agent will be helped by stakeholders such as analysts, investors or the government who also give more attention to large-sized companies (Morris, 1987). Information presented can be used by other parties to control the activities of managers (Jensen & Meckling, 1976).

Signaling theory arises due to the encouragement of companies to provide information to external parties due to the asymmetrical information that occurs in the company both financial information and non-financial information. Signal theory shows great consistency with broad disclosures, namely that companies that do not disclose good information mean that the company alienates itself from having a good impression, that is, being uninformative to the market regarding its existence (Kiswara, 1999). According to Drever et al. (2007), signaling theory emphasizes that the reporting company can increase the value of the company through its reporting. If the company fails to present more information, stakeholders will only rate the company as an average company with companies that do not disclose additional reports. This provides motivation for companies to disclose, through financial statements, that they are better than companies that do not make disclosures. Signaling theory emphasizes that companies will tend to provide more complete information to obtain a better reputation than companies that do not disclose, which in turn will attract investors.

Open disclosure of information about companies is very important for public companies. Information disclosure from the company can be used as a form of transparency and accountability of company management to stakeholders. Information disclosure from the company can be used as a consideration for stakeholders in decision making. Disclosure of information in annual reports can be grouped into two parts, namely: mandatory disclosure and voluntary disclosure. Mandatory disclosure is required disclosure by applicable regulations, while Voluntary disclosure is disclosure that is not required by regulations.

Sharia-based capital markets are developed with the aim of accommodating the needs of the majority of Muslims in Indonesia who have the desire to invest in capital market products in accordance with the basic principles of sharia. With the increasing diversity of facilities and investment products in Indonesia, it is expected that the community will have alternative investments that are considered to be in accordance with their wishes, in addition to investments that have been known and developed in the banking sector.

JII is an index of issuers whose business activities do not conflict with sharia, such as gambling businesses, conventional financial institutions (insurance and ribawi banks), production of illicit products and harm (damaging morals). Although there is a sharia screening process, in its operations the issuers in the JII still do not operate in full sharia so that the implementation of the Islamic capital market is still not comprehensive (syariah) and syumul (perfect). The evaluation of the implementation of the Islamic capital market in

Indonesia, especially at JII, still uses non-sharia concepts that are combined with the Islamic concept.

Many determinants that affect a company's financial performance and broad disclosure of company information. One of the factors that influence voluntary disclosure is the characteristics of the company. Stakeholder theory assumes that corporate accountability is not only related to improving economic or financial performance, but also related to performance in voluntarily disclosing information about business processes, corporate governance, intellectual, social and environmental performance. A report on disclosure of information will be useful for users, especially prospective investors if the information is presented in full so that it is easy to understand, relevant, reliable, and comparable.

Galani et al. (2011) in his research entitled *The Association between Firm Characteristics and Corporate Mandatory Disclosure the Case of Greece* found evidence that Firm Characteristics consisting of company size, profitability, age and type of industrial profile had a significant effect on company disclosures consisting of 100 items of disclosure based on the International Standards Committee.

Regarding financial decisions and managerial decisions, namely funding, investment decisions and disclosure of company information taken by company managers in order to improve company performance, one of the instruments used to control these decisions is corporate governance which is a structure, process, culture and system to create successful operational conditions for an organization.

Some empirical evidence has proven that Corporate Governance has a significant effect on the company's Financial Performance. Brown & Caylor (2004) found evidence that the impact of implementing good corporate governance in addition to eliminating moral hazard and creating a healthier business climate also increased the confidence of investors and creditors. The application of good corporate governance will make investors give a positive response to Financial Performance. Effective corporate governance can increase the probability that managers invest in projects that have a positive net present value. Governed better companies have better performance. Gao & King (2012) also found evidence that Corporate Governance consisting of external audit, internal governance and external governance had a significant effect on the fulfillment of company disclosures.

Agency Theory according to Jensen and Meckling (1976) bases the relationship between shareholders and managers. Differences in interests lead to information asymmetry (gap information) between the owner and manager of the company. Efficient capital markets must be able to provide protection to public investors from unhealthy, dishonest business practices and other forms of manipulation (Suta, 2000). Protection to public investors can be in the form of providing relevant information and facts about the company. Where information obtained from a company's financial statements depends on the level of disclosure of the financial statements in question. This study attempts to analyze the influence of issuers in JII that still operate conventionally non-religious on the extent of sharia disclosures disclosed by issuers.

Ross (1977) states that in the context of imperfect capital markets asymmetric information occurs due to the superiority of manager's knowledge of the company's prospects in the future, so asymmetric information based on the signaling hypothesis relates to funding decisions and financial policies on capital market conditions imperfect (transaction and tax costs) will affect the company's financial performance. Therefore, the company's financial performance is not only determined by optimal investment decisions but also by funding decisions (capital structure decisions).

Capital structure is very important for the company because it involves the policy of using the most profitable sources of funds. Sources of financing can be obtained from own capital and loan capital; therefore, the capital structure is one of the financial decisions related to achieving company goals. Financial managers must be able to improve the company's capital structure. This is intended to support the company in making decisions regarding the determination of funding sources to be used in managing the company's business.

Jensen & Meckling (1976) connects agency cost with debt contained in the Capital Structure. Agency theory says in determining the Capital Structure must consider the costs arising from debt interest, and the existence of differences in interests between the owner and the management of the company. Based on Agency theory, Capital Structure will have a positive effect on the possibility of the company experiencing bankruptcy, the value of liquidation, and the reputation of the manager. Capital Structure has a greater effect on the lender, so the cost of debt becomes bigger.

Chen (2009) found that Capital Structure in terms of company debt size had a significant and positive effect on disclosure of information disclosure in 1039 companies listed on the New York Stock Exchange (NYSE) for the period 1995-1999 and 2001-2005.

The findings above indicate that under the perfect capital market assumptions in reality it is very unlikely to occur so that in real world conditions that are imperfect capital markets (the existence of transaction costs, agency costs, and asymmetric information) the company's financial decisions will affect the breadth of disclosure of company information. Therefore, it is important to understand how financial policy factors decisions on capital structure, light-weight firm and corporate governance are primarily that can influence disclosure of company information.

This research is a development of the results of previous studies related to variables that are determinants of the interaction of firm characteristics, corporate governance, capital structure decisions with company financial performance and their impact on corporate information disclosure decisions. This research model was built on the basis of the development of previous research models based on the evolution of previous research models related to the variables under study. From the description above can be described the conceptual model in this study as shown in figure 1.

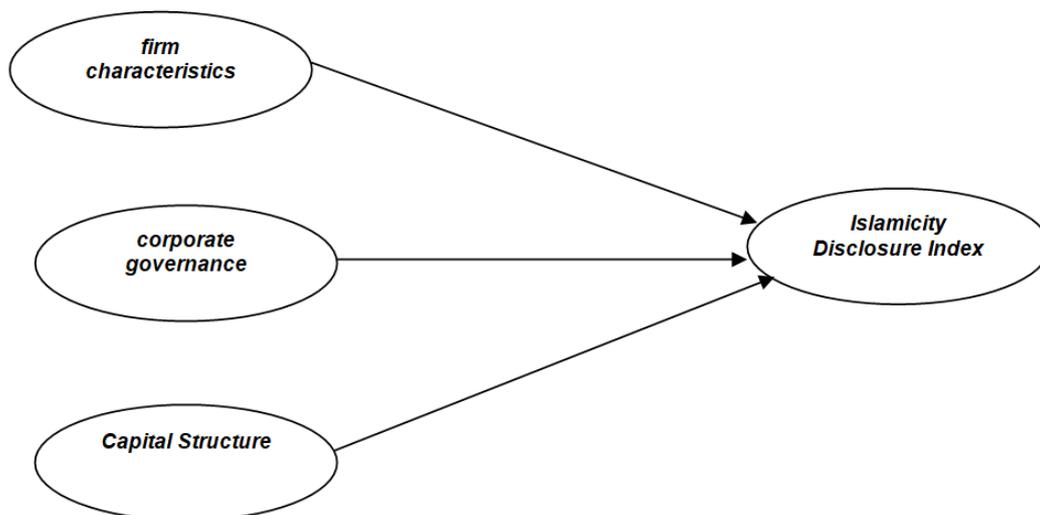


Figure 1 – Framework of Thinking

Based on stakeholder theory, Gray et al. (1995) the survival of a company depends on stakeholder support and that support must be sought so that the company's activities are to seek that support. One strategy to maintain relationships with stakeholders and company shareholders is to disclose financial and non-financial information that informs about economic, social and environmental performance as well as all company stakeholders. Corporate disclosure is expected to fulfill the wishes of stakeholders so that it will produce a harmonious relationship between the company and its stakeholders so that the company can achieve sustainability. This is reinforced by the opinion of Freeman & McVea (2001) on Stakeholder Theory (Stakeholder Theory) which states that a company is not an entity that only operates for its own interests, but must provide benefits to its stakeholders (shareholders, creditors, consumers, suppliers, government, community, analysts and other

parties). The more shareholders, this shows the more interested parties in the company, so the greater the pressure facing the company to disclose information.

Empirical research conducted by Bhayani (2012) in non-financial companies registered in the BSE 100 Index in the period 2008-2009 to 2010-2011 in India found that Firm Characteristics consisted of size, profitability, leverage, listing status, share ownership and company audits have a significant effect on company disclosures. Lucyanda & Siagian (2012) also found that Firm Characteristics consisting of firm size, profitability, leverage, board of commissioner size, company profile, age, management ownership, earnings per share, environmental concern, and growth opportunities had a significant effect on disclosure of responsibility social company for companies listed on the Indonesian Stock Exchange for the period 2007-2008.

H1: Firm Characteristics has a significant effect on Islamicity Disclosure Index.

Agency Theory according to Jensen and Meckling (1976) bases the relationship between shareholders and managers. Differences in interests lead to information asymmetry (gap information) between the owner and manager of the company. The board of commissioners is a form of Corporate Governance where the board of commissioners is in charge of overseeing the performance of the board of directors / managers. Collier & Gregory (1999) added that the greater the number of members of the board of commissioners, the more effective monitoring of the CEO will be. Furthermore, the more the board of commissioners in the company, the more contributions, suggestions and pressure on managers to disclose social responsibility as a liability of the company.

The representative of the principal in the company is the board of commissioners consisting of the main commissioners, commissioners and independent commissioners, which can influence the extent of social responsibility disclosure because the board of commissioners is the highest executor in the company. Furthermore, the existence of independent commissioners is important, because the greater the proportion of independent commissioners, the more effective the level of managerial oversight and then companies do more voluntary disclosure (Eng & Mak, 2003).

Public ownership is also a part of Corporate Governance which is indicated to have an influence on company disclosures. According to Jensen and Meckling (1976) agency costs will increase along with the magnitude of the value of shares outstanding which is very closely related to the proportion of ownership to the company. To be able to reduce agency costs, wider disclosure of information is needed by company management. Therefore, companies with a majority of shares owned by the public will provide broader disclosures compared to companies whose shares are not owned by the public

Aburaya's (2012) research on American companies listed on the FTSE-All Share Index for the 2004-2007 period shows that Corporate Governance consists of board independence, board size, role duality, nomination committee independence, remuneration committee independence, community influence, cross -directorships, education, board meeting ownership structure, independence audit committee and institutional ownership have a significant effect on corporate environmental disclosures

Gao & King (2012) also conducted research on the effect of Corporate Governance on disclosure. Research on companies in China registered with the Shenzhen Stock Exchange (SZSE) in the period 2001 to 2007 found that Corporate Governance consisting of external audits, internal governance and external governance had a significant effect on compliance with corporate disclosures.

H2: Corporate Governance has significant effect on Islamicity Disclosure Index.

Based on Signaling Theory, large companies have high needs for external funds such as debt and stocks, so companies have a greater incentive to signal the quality of the company through increased financial information disclosure (Marston, 2003).

Mollah, et al. (2000) state that companies with a large value of collateralizable assets (fixed assets) tend to use them to obtain large loans / debts, therefore Mollah, et al. (2000) assume that this type of asset also indicates the Capital Structure. Research conducted by Hossain & Hammami (2009) on 25 companies listed on the Doha Securities Market (DSM) in

Qatar in 2007-2008 found that age, size, complexity, and assets-in-place had a significant effect on company disclosures while profitability has no significant effect.

Furthermore, Ning Chen (2009) found that Capital Structure in terms of company debt size had a significant and positive effect on fair disclosure of company information disclosure in 1039 companies listed on the New York Stock Exchange (NYSE) in the period 1995-1999 and 2001-2005.

H3: Capital Structure has a significant effect on Islamicity Disclosure Index.

Table 1 – Hypotheses, Previous theoretical and research references in the Concept Model

H	Hypotheses	Reference
H1	<i>Firm Characteristics</i> has a significant effect on <i>Islamicity Disclosure Index</i>	Bhayani (2012), Lucyanda & Siagian (2012), Kolsi (2012), Soliman (2013), Talpur (2018), Galani <i>et al.</i> (2011)
H2	<i>Corporate Governance</i> has a significant effect on <i>Islamicity Disclosure Index</i>	Aburaya (2012), Samaha <i>et al.</i> (2012), Gao and Kling (2012), Attar (2016), Raithatha & Bapat (2014), Affan <i>et al.</i> (2017), Sepasi <i>et al.</i> (2016)
H3	<i>Capital Structure</i> has a significant effect on <i>Islamicity Disclosure Index</i>	Craig dan Diga (1998), Nguyen <i>et al.</i> (2017), Connor dan Gao (2011), Elfeky (2017)

Source: Data processed by the author.

METHODS OF RESEARCH

This study uses a quantitative approach to the type of explanatory research. Where the view of positivism is a quantitative basis and the search for linkages between research variables is a characteristic of explanatory research. Explanatory research is research conducted to explain causal relationships between research variables through hypothesis testing (Singarimbun & Effendi, 2011). This study aims to test hypotheses from the influence of Firm Characteristics, Corporate Governance and Capital Structure variables on the Islamicity Disclosure Index.

The population in this study is the total number of issuers listed on the Index List of the Jakarta Islamic Index (JII). The total issuers for each period are 30 issuers taken from the List of Sharia Securities based on the largest number of market capitalization in each period

The Islamicity Disclosure Index is voluntary information disclosure in terms of fulfilling the Sharia Compliance Index, Corporate Governance Index and Social / Environment Index based on certain guidelines conducted by companies both Islamic companies and company's non-sharia for the benefit of related parties (Hameed *et al.*, 2004).

According to Hameed *et al.* (2004) the Islamicity Disclosure Index consists of the Sharia Compliance Index (14 indicators from 3 groups' indicator), Corporate Governance Index (35 indicators from 7 groups' indicator) and Social / Environment Index (14 indicators from 4 groups' indicator), presented in the table the following:

Table 2 – Measurement of Islamicity Disclosure Index

No	Variable	Indicator	Measurement
1	Islamicity Disclosure Index	<i>Sharia Compliance Index</i> (<i>supervisory board, basic of information, financial statement.</i>)	$Indeks = \frac{n}{k} \times 100\%$ (Hameed <i>et al.</i> 2003) n = number of items fulfilled k = total items that must be fulfilled
		<i>Corporate Governance Index</i> (<i>composition of board of directors, appointment, Board Meeting, Directors' fees and remuneration, Nomination committee, Remuneration Committee, Audit Committee, Sharia Supervisory, Others</i>)	
		<i>Social/Environment Index</i> (<i>Policy and objective, Community issues, Employees issues, Environmental issues.</i>)	

Table 3 – Measurement of Independent Variables

No	Variable	indicator	Measurement
1	Firm Characteristics	Firm Size	Log natural total asset (Doan and Nguyen 2011)
		Firm Age	The difference between the last year of the financial statements for the year the company was established and the first to operate (Elshabasy 2017; Soliman 2013; Talpur, Lizam, and Keerio 2018)
		Firm List	The latest year difference in financial statements against the company's first listing year on the stock exchange (Talpur, Lizam, and Keerio 2018)
2	Corporate Governance	Independent Board Members	$IBM = \frac{\text{Number of Independent Commissioners}}{\text{Total of Independent Commissioner}} \times 100\%$ (Akhtaruddin et al. 2009)
		Managerial Ownership	$MO = \frac{\sum \text{shares owned by management}}{\sum \text{outstanding company shares}} \times 100\%$ (Iturriaga and Sanz 2001)
		Institutional Ownership	$IO = \frac{\sum \text{institutional shares}}{\sum \text{outstanding company shares}} \times 100\%$ (Shen, Hsu, and Chen 2006)
		Public Ownership	$PO = \frac{\sum \text{public owned shares}}{\sum \text{outstanding company shares}} \times 100\%$ (Hossain, Islam, and Andrew 2006)
3	Capital Structure	Long Term Debt to Total Asset ratio (LTDTA)	$LTDTA = \frac{\text{Long - term debt}}{\text{Total Aset}} \times 100\%$ (Khan, Niazi, and Akram 2013; Khanam, Nasreen, and Pirzada 2014; Marobhe 2014)
		Long Term Debt to Total Equity ratio (LTDTE)	$LTDTE = \frac{\text{Long - term debt}}{\text{Total Equity}} \times 100\%$ (Abdul Rahman 2017)
		Debt Ratio	$DR = \frac{\text{Total Debt}}{\text{Total Asets}} \times 100\%$ (Jain, Shekhar, and Torbey 2003)
		Debt to Equity	$DE = \frac{\text{Total Debt}}{\text{Total Equity}} \times 100\%$ (Van Horne and Wachowicz 1997)
		Collateralizable Assets	$CA = \frac{\text{Fixed Assets}}{\text{Total Assets}} \times 100\%$ (Mollah, Kevin, and Helen 2000)

The steps in the GeSCA are as follows (Solimun, 2013):

- Designing a Structural Model (relationship between latent variables). The design of the structural model of relations between latent variables on GSCA is based on the formulation of the problem or research hypothesis;
- Designing a Measurement Model. Designing the measurement model referred to in the GSCA is determining the nature of the indicators of each latent variable, whether reflexive or formative. Errors in determining this measurement model will be serious, which is to provide biased analysis results. The basis can be used as a reference to determine the nature of indicators whether reflexive or formative are: normative finality, theory, previous empirical research, or if it is not there, it is rational;
- Constructing the Path diagram. When steps one and two have been done, so that the results are easier to understand, the design results are then stated in the form of a path diagram. An example of a path diagram for GSCA can be seen in Figure 2. Research Analysis Model.

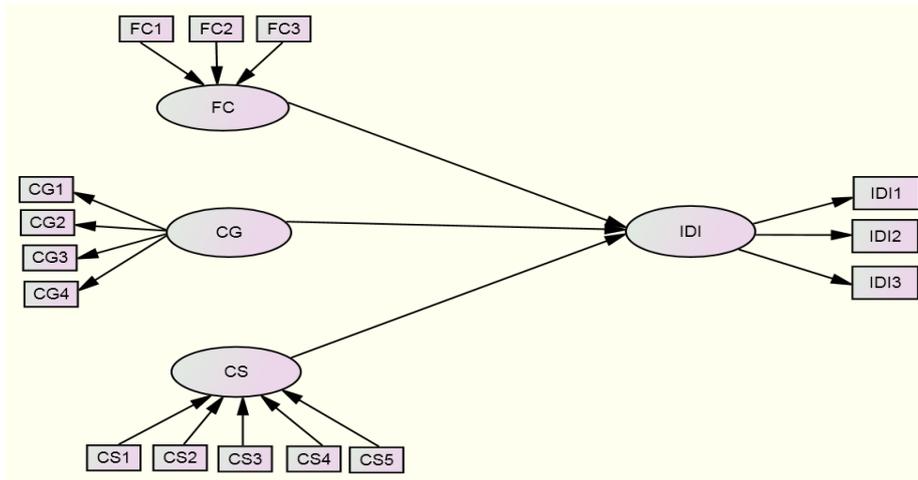


Figure 2 – Research Analysis Model

FC: Firm Characteristics
 FC1: Firm Size
 FC2: Firm Age
 FC3: Firm List
 CG: Corporate Governance
 CG1: Independent Board Members
 CG2: Managerial Ownership
 CG3: Institutional Ownership
 CG4: Public Ownership
 CS: Capital Structure
 CS1: Long Term Debt to Total Asset ratio
 CS2: Long Term Debt to Total Equity
 CS3: Debt Ratio
 CS4: Debt to Equity Ratio
 CS5: Collateralizable Assets
 IDI: Islamicity Disclosure Index
 IDI1: Sharia Compliance Index
 IDI2: Corporate Governance Index
 IDI3: Social/ Environment Index

Goodness of Fit Structural Model is measured using FIT, namely; equivalent to R-Square in regression analysis or total determination coefficient in path analysis or O2.

a. FIT Shows the total variance of all variables which can be explained by the structural model, the FIT value ranges from 0 to 1, the greater the variance of variable variances that can be explained by the model. If the value of FIT = 1 means the model can perfectly explain the phenomenon under investigation.

b. AFIT (Adjusted FIT) similar to R2 adjusted in regression analysis, AFIT can be used for comparison of models. The model with the greatest value of AFIT can be chosen between better models (Solimun, 2012).

RESULTS AND DISCUSSION

Overall Model Testing involving measurement models and structural models based on GSCA calculations and significant tests obtained through Boststrapping which can be seen in table 4 below:

Table 4 – Testing of Fit Models

Model Fit	
FIT	0.374
AFIT	0.371
NPAR	34

Table 5 – Results of Hypothesis Testing Analysis

Effect Testing					
No	Relationship between Variables (Explanatory variable → Response variable)		Estimate	CR	explanation
1	Firm Characteristics	Islamicity Disclosure Index	0,729	15,47*	Significant
2	Corporate Governance	Islamicity Disclosure Index	0,034	0,54	Non Significant
3	Capital Structure	Islamicity Disclosure Index	0,408	2,22*	Significant

Description: *= Significant at $\alpha = 0.05$.

The results of the analysis show that the FIT value is 0.374, this means that the model formed is able to explain all existing variables by 37.4%. The AFIT value = 0.371 shows the diversity of Firm Characteristics, Corporate Governance, and Capital Structure variables

towards the Islamicity Disclosure Index which can be explained by the model after a correction of 37.1%. Testing the hypothesis on GSCA analysis is based on the estimate value and significance between variables.

Hypothesis analysis results:

Hypothesis 1: Firm Characteristics has a significant effect on Islamicity Disclosure Index. The results of the GSCA test show that the path coefficient estimates are 0.729 and CR 15.47 is greater than t table 1.98, at the level of $P = 0.05$. Empirical test results are enough evidence to accept the hypothesis 1. Significant positive path coefficients can be interpreted between Firm Characteristics and the Islamicity Disclosure Index having a direct influence. The effect of Firm Characteristics on the Islamicity Disclosure Index is in accordance with the original prediction that Firm Characteristics has an effect on the Islamicity Disclosure Index. These results indicate that Firm Characteristics is a determining factor for the Islamicity Disclosure Index

Hypothesis 2: *Corporate Governance* has a significant effect on *Islamicity Disclosure Index*. The results of the GSCA test show that the path coefficient estimation is 0.034 and CR 0.54 is smaller than t table 1.98, at the level of $P = 0.05$. Empirical test results are not enough evidence to accept the hypothesis 2. The path coefficient marked positive is not significant, it can be interpreted that between Corporate Governance and *Islamicity Disclosure Index* has a direct influence. The influence of Corporate Governance on *Islamicity Disclosure Index* contradicts the original prediction that Corporate Governance has a significant effect on *Islamicity Disclosure Index*. These results indicate that Corporate Governance is not a determinant of *Islamicity Disclosure Index*

Hypothesis 3: *Capital Structure* has a significant effect on *Islamicity Disclosure Index*. The results of the GSCA test show that the path coefficient estimation is 0.408 and CR 2.22 is greater than t table 1.98, at the level of $P = 0.05$. Empirical test results are sufficient evidence to accept hypotheses 3. Significant positive path coefficients can be interpreted that between Capital Structure and Islamicity Disclosure Index have a direct influence. The effect of Capital Structure on Islamicity Disclosure Index is the same as the initial prediction that Capital Structure has a significant effect on Islamicity Disclosure Index. These results indicate that Capital Structure is a determining factor for Islamicity Disclosure Index

DISCUSSION OF RESULTS

The Effect of Firm Characteristics on Islamicity Disclosure Index. Firm Characteristics variables have a significant influence on the Islamicity Disclosure Index. This finding is in accordance with the hypothesis prediction (H1) which predicts that Firm Characteristics has a significant effect on the Islamicity Disclosure Index. The meaning of these findings shows that empirically Firm Characteristics is a factor that determines the company's Islamicity Disclosure Index included in the Jakarta Islamic Index group. This finding also indicates that the Islamicity Disclosure Index in companies belonging to the Jakarta Islamic Index in Indonesia is determined by the Firm Characteristics structure variable which consists of company size, company age and age of company listing on the stock market

The results of this study are in accordance with the research conducted by Galani et al. (2011) in 43 companies listed on the Athens Stock Exchange in Greece in Greece which found that Firm Characteristics consisting of company size, profitability, age and type of industry profile had a significant effect on corporate disclosure consisting of 100 disclosure items based on the International Standards Committee. Ikpor et al. (2016) stated that company size significantly affected the voluntary level of information disclosure disclosed in annual reports and bank accounts in Nigeria.

Large companies have a greater tendency to provide better disclosure transparency than small companies because this company has more financial and non-financial resources to support the disclosure. Company size is a scale that functions in classifying the size of a business entity. The size of the company will be able to influence the extent to which the information disclosure policy owned by the company. Large-scale companies will have a tendency to reveal more information owned by companies on a smaller scale. This is due to

the fact that companies in the large-scale category will face greater risks than small companies.

Abeywardana & Panditharathna (2016) in his research showed that firm size, profitability, firm age, leverage and board independence as determinants of voluntary disclosure levels and among them company size, profitability and age of the company had a positive relationship the leverage and board independence had a negative relationship. Voluntary disclosure of information on Corporate Governance, environmental and social performance, and the company's business processes is carried out to increase investor confidence. The results of this study are in accordance with stakeholder theory which explains that the age of a company is an indicator that the company exists and can compete. Older companies will have in-depth knowledge about how they should act in providing information about companies to outsiders, therefore, companies that have long operated with older ages will have a tendency to disclose complete information, including Corporate disclosures. Governance, environmental and social performance, and business processes, because the complete information disclosed in detail will provide added value to stakeholders and potential investors.

Nguyen et al. (2017) find evidence that Firm List influences the level of disclosure of the accountant's information environment. The age of the company's listing is the age of the company which is calculated based on the date of the IPO (Initial Public Offering) of the company. The longer the age of the company listing, the company will tend to disclose its information more broadly. Owusu-Ansah (1998) provides three reasons, first, younger companies will experience competitive losses if they disclose information such as research costs, capital costs and product development. Second, the costs of disclosing information such as the costs of gathering, processing and disseminating information, may be burdensome to younger companies. Third, younger companies do not have experience or track record in disclosing information.

The results of the study are in line with the findings of Talpur (2018) which states that the practice of disclosure of voluntary corporate governance among companies listed on Malaysian property increased by a significant percentage. Companies listed on property are motivated to disclose this information for the benefit of shareholders. On the other hand, the larger the company, the higher the level of disclosure, large companies have more interest in disclosing additional information compared to small companies. Firm size as a factor that influences the level and quality of voluntary disclosure of corporate governance practices.

The Effect of Corporate Governance on Islamicity Disclosure Index. The Corporate Governance variable has a non-significant effect on the Islamicity Disclosure Index. This finding contrasts with the hypothesis prediction (H2) which predicts that Corporate Governance has a significant effect on the Islamicity Disclosure Index. The meaning of these findings shows that empirically Corporate Governance has no significant effect on the Islamicity Disclosure Index, meaning that it is not a determining factor in the company's Islamicity Disclosure Index listed in the Jakarta Islamic Index in Indonesia. This finding also indicates that the Islamicity Disclosure Index in companies listed in the Jakarta Islamic Index in Indonesia is not always determined by the Independent Board Members, Managerial Ownership, Institutional Ownership and Public Ownership variables.

The direction of the path coefficient of Corporate Governance that is positively insignificant does not support the research concept of Samaha Khaled (2010), Raithatha & Bapat (2014) which shows that good Corporate Governance will further increase Firm Disclosure. The director, as the leading position, is very important and is the key to the company's success. This finding also explains that although the proportion of independent commissioners is higher than required, independent commissioners cannot function properly. This is more due to the procedure for selecting the board of commissioners. In Indonesia, the board of commissioners is generally set only as a formality to comply with the rules. Members are not independent and lack adequate competence. This is a common phenomenon in Indonesia that a government official or former government official is chosen as a member of the commissioner because it hopes to be able to help the company to gain access to government institutions more easily.

Theoretically, the Board of Commissioners is a part of the company that has the task of overseeing the performance of the Board of Directors in carrying out management functions in the company. When carrying out its supervisory role, the effectiveness of the supervisory function will be hindered if at the same time members of the Board of Commissioners participate in management in the company. The transfer of wealth from minority shareholders to the controlling shareholders will occur due to cooperation between management and the Board of Commissioners. In order to reduce these risks, the Board of Commissioners needs to be held by independent parties, in agency theory this is one way to maintain the functions of the Board of Commissioners in order to remain independent in structural management.

The direction of the path coefficient of Corporate Governance which is positively insignificant does not support the research concept of Affan et al. (2017) states that institutional ownership has a significant influence on the quality of disclosure of corporate financial information. Institutional ownership has an influence on monitoring the behavior of company managers. The influence of the level of supervision by institutional shareholders in this study is based on the average share ownership by the company held by institutional shareholders, so that gaps can be minimized which will automatically reduce opportunistic actions.

The low percentage of managerial ownership and the dominance of institutional ownership in the shareholding structure of companies classified as JII in Indonesia, this also shows that there is no clear separation between ownership and control of the company and this condition results in the majority of companies still being controlled by shareholders the majority is through a corporate legal entity or holding company so that the management of the company is still under control or an extension of the majority shareholder controlled by the founding family or certain. Second, the empirical conditions in the capital market in Indonesia which are still emerging markets have historically had a background and the existence of different cultures with empirical conditions on the capital market in developed countries where the agency theory was built.

The dominance of institutional ownership in the ownership structure of companies classified as JII in Indonesia, empirically has insignificant influence on disclosure of company information. This indicates that the role of managerial ownership is still weak and institutional ownership does not act as an effective monitoring agent as expected and this finding also indicates that the role of the distribution of ownership or the number of ordinary holders in JII companies in Indonesia is still weak in optimally monitoring the company. The results of this study also indicate that in the capital market that is still an emerging market, it shows that the institutional ownership structure has a negative effect on disclosure of company information. The dominance of institutional ownership in the ownership structure of the company that is the sample of this study indicates that there is still a concentration of company ownership in the ownership structure of the company which is a sample of institutional ownership.

The greater the ratio of shares held by the public, the greater the likelihood that the company will disclose information in the annual report. The greater the share of shares held by the public; the more parties will need information about the company so that there will be more extensive disclosure of company information demanded in the annual report. The more shares owned by the public or the community, the more people will control the development of the company. So, the company will have a broader tendency to disclose its company information. However, it should also be remembered that the Islamicity Disclosure Index is included in the type of voluntary disclosure so that issuers listed in the Jakarta Islamic Index (JII) are not required to meet the Islamicity Disclosure Index.

The Effect Capital Structure on Islamicity Disclosure Index. Capital structure variables have a significant influence on the Islamicity Disclosure Index. This finding is in accordance with hypothesis prediction (H3) which predicts that Capital Structure has a significant effect on the Islamicity Disclosure Index. The meaning of these findings shows that empirically the capital structure is a determining factor in the company's Islamicity Disclosure Index, which includes JII in Indonesia. This finding also indicates that the decision to disclose the Islamicity Disclosure Index on companies included in the JII in Indonesia is determined by capital structure variables.

Capital structure is a comparison between long-term debt to own capital. Fulfillment of company funding needs can come from own capital, share capital, retained earnings and profit reserves. If the company uses capital derived from its own capital is still lacking (deficit), then management needs to consider funding from outside the company, namely from debt (debt financing). In the selection of capital structure management, company management must first determine a profitable way of choosing funding so that the company's survival is guaranteed. The choice of form and type of fund must pay attention to the purpose of using the fund, if the funds are used to meet short-term needs, the investment should be funded with short-term funding sources. While the funds used for long-term investments, the company must use long-term funding sources.

The direction of the path coefficient of capital structure is positive, this indicates that the capital structure has a positive and significant effect on the Islamicity Disclosure Index. The meaning of these findings shows that increasing the use of debt in the capital structure will increase the Islamicity Disclosure Index. on companies included in JII in Indonesia. This is because the use of debt in the company's capital structure in the companies included in the JII in Indonesia provides benefits, namely the tax savings from interest payments. Nguyen et al. (2017) in his research found that there was a positive influence between leverage as measured by the Long-term debt to total asset ratio (LTDTA) and the level of disclosure of environmental accounting information. This indicates that companies with larger amounts of long-term debt tend to have high levels of company disclosure and transparency.

The higher the level of corporate leverage, the greater the agency cost or in other words the greater the likelihood of the prosperity transfer from long-term creditors to shareholders and managers so that the company is required to make more complete disclosures to meet the information needs of creditors. long-term. The company's dependence on debt in financing its operations is reflected in leverage, as an illustration of the company's capital structure, so that the level of risk of uncollectible debt can be seen. Through leverage measured using long-term debt to total assets will provide a relatively long time for the company to pay its obligations. High level of leverage will tend to do more disclosure of company information, because the management will try to explain why the level of corporate debt tends to be high.

Elfeky (2017) in his research found that there was a positive influence between leverage measured by LTDER and the level of voluntary disclosure of company information. This indicates that companies with a greater amount of long-term debt to equity tend to have high and transparent levels of corporate disclosure. Companies that earn profits from long-term debt to capital increase, the capital will be obtained more from debt. So, by increasing the use of long-term debt to capital, the use of debt will increase the company's loan capital, thereby increasing profits will affect the increase in debt to the company because creditors will be interested in providing loans to companies because they see a high level of profit. This condition will cause management to tend to disclose company information more, because management will try to explain why the company uses long-term debt.

Furthermore Semper & Beltran (2014) shows that leverage measured by Debt to Equity Ratio has a significant influence on risk disclosure and risk factor index. Market conditions require companies to disclose more information about risks so that large information disclosures will lead to higher equity costs. The leverage ratio shows the extent to which the assets of the company are financed by borrowing debt. A high leverage ratio indicates that the company gets funding from investors or creditors outside the company. The higher the leverage ratio means the greater the proportion of corporate funding obtained from debt. Agency signal theory predicts that companies that have higher leverage ratios will disclose more information because of demands from investors who have invested their shares, this is done to provide oversight of every management action in managing the funds and facilities provided by investors.

Baimukhamedova & Baimukhamedova (2015) in their study found that there was a positive influence between leverage measured by the ratio of total liabilities to total assets and the level of information disclosure. This indicates that companies with a larger amount of debt tend to have a high level of corporate disclosure and transparency. Debt consists of

current (short-term) and long-term liabilities. Creditors will like a low debt ratio because with low debt there will be enough reserve funds for creditors if there is liquidation at the company. But for company owners, high debt ratios will be able to double profits or profits and also reduce control of the company. In connection with signaling theory, management needs to signal that the composition of total debt with total assets is still in the safe category, meaning that the company still gets a high profit compared to the cost of debt that must be incurred. Management's consideration in disclosing information voluntarily will be affected by the presence of agency costs and benefits. Management will disclose information in full if the disclosure of information has substantial benefits compared to the costs spent. This information is a signal to the public that the company has prospects in the future.

The company's capital structure will be related to the consideration of the costs and benefits of using funds through debt and equity (Myers 1984). In order to fulfill the goal of maximizing profit for shareholders realized by maximizing the value of the company, it will not materialize if the company has a capital structure with high debt. The composition of the capital structure owned by the company will have an impact on the company's financial condition. The optimal capital structure in the company will provide shareholder benefits. Increasing the source of funds through debt will increase the amount of interest the company must pay. Increasing the level of debt also indicates the inability of companies to minimize the risk of liquidation. This condition will make investors rethink if they will invest in the company.

Balakrishnan, Core, & Verdi (2014) show that Collateralizable Assets that are high in the structure of assets used by collateral will cause wider disclosure of information. Large real estate companies with high collateral ownership in fixed assets will disclose their financial statement information more broadly to make it easier to obtain financing. Company asset structure will have a direct impact on capital structure because the structure of assets in the company is a guarantee when the company borrows money from creditors to increase its debt. Based on the theory of information asymmetry (Chen and Strange, 1998), the structure of assets in the company has a direct impact on capital structure considering the company's asset structure can be used as collateral when the company borrows money from creditors to increase its debt, when creditors do not have extensive and extensive information regarding the behavior of the company's capital structure, the company that has a little asset structure will find it difficult to get funds from investors, thus the company needs to disclose complete information about the condition of its asset structure.

Collateralizable assets are assets that can be guaranteed to creditors to guarantee corporate loans. Titman and Wessels (1988) state that companies that have more collateral assets have a smaller agency problem between creditors and shareholders because such assets can function as collateral for debt. Given that collateralizable assets function to reduce agency problems, it is expected that the amount of collateralizable assets owned by the company will have a positive effect on dividends. Assets guarantees are company assets that can be used as collateral for creditors. Creditors often pay attention to the amount of collateral in the form of assets when lending to a company. If the company has a large asset guarantee, then this is good news as a signal that the company has the ability to guarantee debt.

CONCLUSION

Firm Characteristics measured by Firm Size and Firm Age have a significant influence with Islamicity Disclosure Index. This finding is in line with the research concepts of Nguyen et. Al (2017), Talpur (2018), Abeywardhana (2016), Soliman (2013), and Galani et al. (2011) which states that Firm Characteristics consists of firm size, firm age and firm list affecting disclosure of company information. This finding indicates that Firm Characteristics empirically is a determining factor for Islamicity Disclosure Index in companies included in JII that are listed on the Indonesia Stock Exchange (IDX).

Corporate Governance as measured by Independent Board Members, Managerial Ownership, Institutional Ownership, and Public Ownership have a non-significant effect on

Islamicity Disclosure Index. The direction of this insignificant influence is the finding of this study. This finding is an anomaly that occurs in companies included in the JII listing on the IDX and this finding is not in line with the research concept of Samaha et al. (2012), Gao and Kling (2012), Affan et al. (2017), and Sepasi et al. (2016.) which states that good Corporate Governance will increase Firm Disclosure to parties outside the company, internal governance leads to higher compliance with disclosure requirements, Ownership structure has an influence on monitoring the behavior of company managers and Agents are required to provide periodic information reports on the principal about the business processes that are implemented. Principals will provide an assessment of the performance of their agents through the disclosure or reporting of information submitted therefore, disclosure of company information is a means of management accountability to its owners

Capital Structure has a significant effect on Islamicity Disclosure Index with the direction of positive coefficient, which indicates that the use of debt in the company's capital structure in the companies included in the JII in Indonesia, this finding supports the research concept. Nguyen et al. (2017) Elfeky (2017), Semper & Beltran (2014), Balakrishnan, Core, & Verdi (2014) which states that companies with larger amounts of long-term debt tend to have high levels of company disclosure and transparency, market conditions require companies disclose more information about risks so that large information disclosures will lead to higher costs of equity, collateralizable assets that are high in the structure of assets used by collateral will lead to wider disclosure of information

RECOMMENDATIONS

The results showed that the Corporate Governance variables as measured by Independent Board Members, Managerial Ownership, Institutional Ownership, and Public Ownership had insignificant effects on the Islamicity Disclosure Index. This insignificant effect of Corporate Governance occurs due to the still low managerial ownership and the dominance of institutional ownership in the ownership structure of the company. This finding shows that empirically the structure of Corporate Governance is not a determining factor in the disclosure of corporate sharia information. Based on the results of this study, the suggestions that can be given to companies that are included in the JII listing on the IDX are that the spread of equitable share ownership is needed, not concentrated in institutional ownership, this is needed so that the decisions issued by company management prioritize the interests of the overall shareholders. Besides that, to avoid practices that harm minority shareholders (public shareholders).

Recommendations for the development of this research in the future are related to the substance of the study, namely adding qualitative external factors such as socio-political conditions, security, culture, legal certainty, capital market regulation, and technology and government policies relating to financial performance.

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PERSPECTIVE ON ACCOUNTABILITY IMPLEMENTATION IN INDONESIA'S DZIKRUL GHAFILIN AND AL QUR'AN RECITATION COMMUNITY

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ABSTRACT

The disadvantages of conventional accounting approach reporting only economic and financial data suggest that the majority of accountability remains in the form of physical financial statements and human-centred accountability superiority. This raises criticism by finding a more comprehensive new approach. The spiritualist paradigm produces a spiritualist research design based on spiritual spontaneity. Spiritual spontaneity is a spiritual experience between a person, the environment and God. The approach of the spiritual paradigm of accounting comes from the Qur'an and the Hadeeth. The informants in this study were Gus Miek's son and worshipers as well as trying to communicate with Gus Miek through spiritual activities. The results of this study indicate that accountability is not only seen from the physical side only because in accordance with the human task as Khalifatullah fil ardh.

KEY WORDS

Accountability, financial reports, spiritual paradigm.

The conventional accounting approach has attracted criticism that highlights the inability of conventional approaches to consider inconsistencies, inequities, invisibilities and inequalities in Western life to provide social change (Gray, 2002; Mathews, 1997). This means that the conventional accounting framework has been designed to identify, collect, measure and report economic and financial data (profit or loss) to support managerial decision-making. Thus, the conventional accounting framework mainly reflects the needs of shareholders regarding the economic and financial performance of the organization.

Mainstream accounting is reflected in the concept of income. This leads to accounting practice to generate income for shareholders. This concept is the view of entity theory (Triyuwono, 2012). This view argues that the company will exist if it can create income that raises the values of egoism. Kam (1990) uses the concept of pairing to not let the egoistic nature by using the concept of value added income. The concept uses enterprise theory which views the income earned by the company as a result of the company's efforts from many participants. Meanwhile, Triyuwono (1997) believe in a broader concept in which the income should be distributed to many participants and to the universe (nature).

Accountability philosophy in accounting is more emphasized on "value" in financial statements, but in non-profit organizations, accountability is not just limited to the "value" of a person, but rather to "value" spiritually manifested through sincerity and gratitude in giving something (Silvia and Ansar, 2011). Religious and religious organizations face challenges in understanding accountability (Cadge and Wuthnow, 2006). Religious-based organizations tend to promote holy missions rather than following accountability rules like the commercial and public sectors (Goodin, 2003). Religious-based organizations tend to focus on beliefs and values rather than commercial structures (Cadge and Wuthnow, 2006; Clemens, 2006) and produce accounts that are not fully compatible with formal reporting (Rose-Ackerman, 1996).

Critical Accounting argues that accounting should serve as an intermediary between the organization and society, thus recalling its role in the wider social context (Lehman, 1992). According to critical theory, accounting must be based on principles of democracy and accountability (Gray *et al.*, 1996). That is, organizations must provide accountability not only

to shareholders but also to various stakeholders who are affected by organizational activities (Gray et al., 1996). In addition, the accountability of various stakeholders must go beyond financial orientation and include social impact as well. This is the basis for making the organization more accountable (Andreus and Costa, 2014). Triuwono (2012) deconstructs the value of accounting by incorporating the value of love which is also the character of God who brings peace.

Jayasinghe and Soobaroyen (2009) examines accountability practices in Buddhist and Hindu religious organizations in non-Western societies. Religious organizations such as temples played a major role in society at the time, especially in regulating social and political practices (Nelson, 1990). Usually, many attached to the element of religiosity, namely God, immortality, reincarnation and maintaining mutual dependence and closeness with the temple and the leader.

In addition, a broader issue of accountability in religious organizations on some research outlines the importance of particular interests or user groups whose information needs to appear more in harmony with the use of formal accountability mechanisms (Swanson and Gardner, 1986, 1988; Laughlin, 1990; Berry, 2005). Moreover, the theoretical approach to most post-1980 studies has been dominated by a sacred mission rather than a secular divide focusing on the perceived "discrepancy" between religious belief systems and the use of accounting practices and official accountability in churches (Laughlin 1984, 1988; Booth, 1993).

The use of alternative models of articulation analysis as a way of conceptualizing the role of accounting practices and accountability in religious organizations (Gallhofer and Haslam, 2004; Hardy and Ballis, 2005; McPhail *et al.*, 2005). Hardy and Ballis (2005) argue that accounting studies in the context of religion can be improved by seeking to better understand the internal and external societal belief systems.

The practice of accountability in the context of business and government organizations emphasizes the dimensions of human relationships with human beings. Thus, the nature of management accountability emphasizes more on the physical aspect and ignores the mental aspects. Physical aspects appear in the financial statements and financial performance analysis. This aspect is greater in its disclosure than in the mental aspects. The mental aspect is seen in the efforts of accountability to employees, owners and investors in the form of social programs, health, and so forth. Accountability in the context of religious social organizations emphasizes the physical, mental and spiritual aspects (Amerieska, 2009).

Particularly in East Java, Indonesia, Qur'an recitation (in local language known as *semaan* Al Quran) and Dzikrul Ghofilin (praising Allah using holy sentences) by Jantiko Mantab has been known since mid 1970s. This communal activity was initiated by the late KH. Hamim Tohari Jazuli, also known as Gus Miek. Initially, Gus Miek spreads and disseminates Islamic values to the local people who explicitly perform inappropriate and sinful behaviour such as gamblers, hookers, drunker, and criminals. Thus, his approach on Islamic teaching, he called as *Suluk Jalan Terabas*, considerably controversial in that time. Nevertheless, good responds were obtained from local people as indicated from the increasing numbers of the community member. Gus Miek also gain support and respect from other Indonesian Muslim scholar during his time, two of them were the well-known K.H. Abdul Hamid (from Pasuruan, Indonesia) and K.H. Abdurrahman Wahid (Gus Dur), who also the 4th President of the Republic of Indonesia (Ibad, 2007).

Street, traditional markets, bars, bus stations, jails were Gus Miek's *madrasah*, where he can meet people, help and teach people about Islam. His physical appearance was ordinary and he wore clothes as commonly used by local people, thus Gus Miek's presence are very inclusive and welcome by them. The Jantiko Mantab community with main activities of *semaan* Al Quran and Dzikrul Ghofilin was founded as the nurturing place for those "sinners" to learn Islam and accepting Allah SWT in their lives. After his death, Gus Miek legacy has been growing national-wide since then with more community member and coverage area (Ibad, 2007).

The organisation and/or management of the place of worship are usually assigned to a respected religious figure(s). These influential people or groups usually direct all policies and

organizational management. The typologies of leaders or figures including their choice and policy orientation will be very influential in determining their managerial style. This study discusses the concept of accounting by considering theology as an instrument of emancipation to support the struggle as an instrument of capitalist oppression through observation on the study of Dzikrul Ghafilin and Semaan Al Qur'an JANTIKO MANTAB in East Java-Indonesia founded by Kyai Haji Chamin Djazuli (Gus Miek).

METHODS OF RESEARCH

This research is a qualitative research with spiritualist paradigm approach. The spiritualist paradigm produces a spiritualist research design based on spiritual spontaneity. Spiritual spontaneity is a spiritual experience between a person and the environment and God. This paradigm brings the researcher into a unity with the reality researched with God as the centre of reality.

The data collection tool in this research is the researcher himself. Data in the form of fact or phenomenon information that occurred in the field. Data collection is done through participant observation, in-depth interviews with informants and documentation. Participatory observations were made by the involvement of researchers in the Qur'an recitation process of Jantiko Mantab and Dzikrul Ghafilin during the span of approximately three months. Interviews are conducted unstructured and informal in various situations. Objectives include constructing about people, events, organizations, feelings, motivations, demands, concerns and other aggregates, reconstructing such unanimity as experienced by the past, projecting roundness as expected in the future, verifying, altering and expanding the information obtained from others, both human and nonhuman (triangulation), and verifies, alters and builds complete accountability in the Qur'an recitation of Jantiko Mantab and Dzikrul Ghafilin (Lincoln and Guba, 1985). In addition to interviews, the data collection is done by researchers trying to present the figure of Gus Miek through some spiritual activities.

This study uses a spiritual perspectives analysis method through *tawasul*, *dzikir* and prayer. *Tawasul* is getting closer or pleading with Allah (God the Al Mighty) by means of *wasilah* (intermediary) of a person who has a good faith to Allah. The Muhaqiqin Sufis explain that a *tawasul* is a pray that need to be "pulled", in which people who do not sufficiently understand their prayer will be helped by people who have better understanding and have more faith in prayer. These "encouraging" prayers are also for those people whose pray was not accepted because their souls are not clean, hence these people need to be cleaned and guided by those who pray and have pure hearts. *Dzikir* or recitation is often defined by mentioning or remembering Allah verbally through *thayyibah* sentences. Recitation requires a sense of love and expecting for Allah's love. Therefore, no one will practice it except a soul filled with a sense of liking, and love to always remember and return to Him. The *dzikir* in this study was carried out by and followed the Dzikrul Ghofilin practice. Prayer is a plea to Allah accompanied by humility to get a good and benefit at His side. One of the practice is the *syir* pray of Dzikrul Ghofilin. In the meaning of accountability information of the recitation of Al-Qur'an Jantiko Mantab and Dzikrul Ghofilin, the researchers use literature and revelation through the Qur'an and Hadith by considering the three elements of God, nature and human (macrocosm and microcosm). Revelation in this study is the premise of truth and grand theory that still needs to be translated into operational middle-level theory.

RESULTS OF STUDY

Gus Miek invites all the Semaan pilgrims to learn to prioritize and believe in things that should be prioritised and believed. The most important things concerning the present and the needs of the present, to be less noticeable, is praying five times in congregation, and be more familiar with the Qur'an. Gus Miek invites people to return to the right viewpoint. Preparation of the right priority scale in everyday life, so that will gradually improve the quality of life, and bring peace and inner tranquillity.

Gus Miek not only focuses on physical worship alone, but also arranging and guiding all who are involved in the Qur'anic *semaan* to do the appreciation and deepening of the worship performed so that they are not stuck with the routines. Gus Miek Through this collective act of worship, through selective interaction among all who engage in this activity, Gus Miek teaches the "standard akhlaq values". The values of humanity and the slavery necessary to attain predicate as a human and a servant, to be properly referred to as "human" and as "servant of God".

The concept of the Qur'an is how to keep it safe, orderly, neat, responsible, and humane. Gus Miek presents the principles of implementation as a guide as follows: (1) all who participate or deliberately involved must be eager to be sincere. Eager to really cleanse his heart and focus on God; (2) should be performed with a sympathetic and attractive appearance. All who participate or self-engage must be courteous inwardly. This is because it involves many people and interacts with others; (3) the implementation should be simple but weighty. Focus on worship, no need to use too many "accessories" that potentially divert or turn the intention from the right direction.

With regards to sincerity, Gus Miek invites that during the implementation of the *Semaan Qur'an*, everyone should be physically and spiritually prepared to be focus and their intentions should be for merely worship only, studying *zuhud* and *kholwa*. Gus Miek emphasizes not to be infected by the disease " *al-jarru wal majruru muta'alliqun bil fulus* " (the person who invite and being invited should not materialistic).

Gus Miek gave directions to the *huffadhul* of the Qur'an (person who memorise and recite the Qur'an) to be self-sufficient by preparing for all their own needs before coming to the assembly of the Qur'an, including transportation and accommodation. This is in order to maintain their intention to the assembly of the Qur'an only for the worship and not to expect anything from the host. Gus Miek believes that the factor that will make this worship gain the pleasure of God is the persistence and resilience of all involved in trying to sincerely act for the God's sake.

To those who are trusted to organize worshipers, Gus Miek calls on each of them to have a servant mentality who is ready to give service rather than to demand to be served. With everyday language, Gus Miek explains the hadith of the Prophet SAW: "*A'adhomunnas ajran khodimuhum*" (the greatest man of his reward is who is ready to serve his neighbour), which means that whoever is ready to be a "servant" for others, then "the door of heaven" will be revealed for him. If the person does not have this mentality, as a counterpart he must have a "solid prayer" that will cover his shortcomings in providing benefits to the people. If the readiness to serve does not exist, as well as the "solid prayer", then it is better for him to resign.

Gus Miek strongly dislikes personal or group arrogance that makes someone arbitrary to others or other groups through all sorts of abuses, even if it is just a simple violation, and invites everyone to be a pioneer in becoming a good citizen, to always maintain tidiness and security. Do not because of caution less, the heart becomes polluted and tarnished.

About the concept of simplicity, which is the "standard value" and fundamental how to make this *Semaan Al Qur'an* can be held with simple but weighty, not burdensome, with the priority of togetherness and mutual cooperation. Implementation must be neat and humane. All that involved, were touched and approached according to their ability and opportunity, without imposing themselves beyond their limits. There should be no compulsive, though subtle, attitudes or actions that cause people to engage in difficulty to organize their hearts or feel compelled to participate in the *Semaan Al Qur'an*. Anyone who is trusted to continue the mandate of the people must carry it out with trust, responsibility, and on target according to the intention of the provider. The implementation is simplified by focusing on efforts to implement quality worship.

Based on the above findings, the concept of accountability of *Dzikrul Ghafilin* and the study of Qur'an developed by Gus Miek is always carrying a holy mission with accompanied by ethics and humanity as *khalifatullah fil ardh* (God's representative on earth) and servant for fellow human.

DISCUSSION OF RESULTS

There is a debate on the literature approach in determining and interpreting accountability (Sinclair, 1995) and developing accountability mechanisms, principles and frameworks for non-profit organizations (Fry, 1995; Jordan, 2005; Goddard, 2004; Dixon *et al.*, 2006; Unerman and O'Dwyer, 2006a, 2006b; Gray *et al.*, 2006). Accounting researchers were initially explored the extent to which accounting systems and accounting practices were used in the religious settings of the dominant functional mindset and modernization in financial accountability systems (Futcher and Phillips, 1986; Kreiser and Dare, 1986; Swanson and Gardner, 1986; Faircloth, 1988; King, 1988; Zietlow, 1989; Bowrin, 2004). However, there is also a growing interest in a deeper understanding of social, organizational and more crucial, spiritual contexts in which accounting and accountability practices are operated.

In connection with the unique "sacred" environment that defies rational proof and calculation (Laughlin, 1988; Morgan, 1990) and one that is supposedly characterized as "theoretically extreme and dominated by non-financial ideologies" (Lightbody, 2003), there have been many research on how "Accounting" really interacts with religion. However, debates and discussions of what the so-called "sacred rather than secular" application has become subjects (Laughlin, 1988; Booth, 1993; Abdul-Rahman and Goddard, 1998; Kluvers, 2001; Jacobs and Walker, 2004; Kreander *et al.*, 2004; Irvine, 2005; Jacobs, 2005; Hardy and Ballis, 2005; McPhail *et al.*, 2005).

At the same time, the involvement of spirituality and accounting can be achieved through theological analysis, rather than being articulated primarily from a secular and sociological point of view (Gallhofer and Haslam, 2004; McPhail *et al.*, 2004; Kreander *et al.*, 2004). For now, however, few researchers have studied in detail the characteristics of accountability systems and practices in the context of religious organizations (Laughlin, 1990; Abdul-Rahman and Goddard, 1998; Jacobs and Walker 2004; Kreander *et al.*, 2004; Berry, 2005).

In the study of accounting and accountability in Islamic religious organizations, the above issues were also mentioned by Abdul-Rahman and Goddard (1998). The views of the Islamic world cover both worldly and religious aspects. The mundane aspect must be related in a deep and inseparable way of religious aspect without neglecting the mundane aspect. In the concept of *Tauhid* (The Oneness of Allah the God), Islam has developed its own concept of accountability, everyone is obliged to accept all duties and obligations and benefits of any ownership or responsibility entrusted to them and this will be held accountable on "The Day of Judgment". Unlike traditional concepts and limited accountability (principal-agent and relational-based), they argue that accountability has interrelated aspects: universal and one of history (Willmott, 1996). The universal aspect of accountability is part of human nature and behaviour, in "[...] people continue to engage in creating and giving accounts for others, and for ourselves, about who we are, what we do, and so forth" (Abdul-Rahman and Goddard, 1998) and that accountability can be attributed to human aspirations for communication and social interaction.

The role of formal accounting and accountability in religious settings can be conceptualized by certain religious teachings or beliefs. Irvine (2005,) argues that "different denominations, like organizations, will have different views about whether accounting is compatible with their religious beliefs". In Islamic societies, the development of accounting theory must be based on the provisions of Islamic law and the arguments that are not contrary to Islamic law. The Islamic legal view is very clear about the basic principles of how financial reporting and accounting practices should be conducted (Lewis, 2001).

The word *Hisab* in the Qur'an is repeated more than eight times in different verses (Askary and Clarke, 1997), e.g. Al-Insyiqoq 7-13, Al-Ghasyiyah 25-26, Al-Mu'min 17, Al-Baqarah 202, Al-Imron 19, An-Naba 27 and Al-Anbiya 47. *Hisab* (account) is the root of accounting, and the reference in the Qur'an is to account in its generic sense, relating to the obligation of every Muslim to Allah for all matters relating to human endeavour. All resources are available to individuals made in the form of trust. For what God gives in the form of

goods, property and assets. The extent to which individuals should use what is entrusted to them is determined in the Shari'a, and individual success in the Hereafter depends on their performance in this world. In this case, every Muslim has an account with God, which records all good and bad actions, accounts that will continue to die, because God shows everyone's account on the day of their judgment. This adds an extra dimension to judgment and deed compared to those already embodied in conventional financial statements.

Hence, the fundamental similarity between reckoning in Islam and accounting lies in the responsibility of every Muslim to carry out the task as described in the Qur'an. Similarly, in business firms, management and owners of capital are responsible for their actions both within and outside their companies. Accountability in this context means accountability to society (*ummah*). Muslims must be committed in both religious and secular dimensions, and their actions are always bound by the shari'a of Islamic law so as to embody a duty and practice including worship, prayer, courtesy and morals, along with commercial transactions and business practices (Lewis, 2006).

Muslims should conduct their business activities in accordance with the requirements of religion to be fair, honest and just to others. Business activities should be broadly inspired and guided by the concept of *tauhid*, *ihsan*, and *tawakkal* with a legal framework committed to values such as justice and the prohibition of *usury* (interest) and the ban on *ihtikaar* (hoarding) and other malpractices. In fact, a large number of Islamic concepts and values determine the level and nature of the business activity (Rahman, 1994). There are many positive values, such as *iqtisad*, *adl* (fairness), *ihsan*, *amanah* (trusted), *infaq*, *sabr*, and *istislah*. On the contrary, there are also some negative values, and thus should be avoided: *zulm*, *bukhl*, *iktinaz*, and *israf*. Economic activity in positive parameters is *halal* and in negative parameters *haram* that must be managed. Production and distribution arranged by halal-haram code must comply with the idea of *adl*. The Qur'an provides a framework of values and concepts for fair business and commercial systems.

CONCLUSION

The implication of this research is that Gus Miek wants to make a change in interpreting the concept of accountability that is currently loaded with capitalist interests by incorporating Islamic values sourced from Al Qur'an and hadeeths through his Dzikrul Ghafilin and the study of the Qur'an's community. The community was used as a manifestation of Gus Miek's point of view that man is God's representative on earth (*khalifatullah fil ardh*) and also a servant serving others (*abdullah*) at the same time. The changes, in the concept of accountability that refers to capitalist principles that aim only to generate income, becomes more widespread by adding the values of God's love.

The concept of accountability is the rights and obligations of humanity as God's khalifah on earth. Every human being shall be obligated to accept all duties and obligations and any benefits of ownership or responsibility entrusted to them and this shall be judged on "Judgment Day". Accountability is a human responsibility as *khalifatullah fil ardh* which includes physically in the form of financial statements up to non-physical with the aim of getting closer to Allah SWT.

The concept of accountability developed by Gus Miek was better understood by Gus Miek himself, because he knew the real intention and purpose of the concept of accountability whereas the researcher only able to seek the building of Gus Miek accountability concepts from various sources which may sometimes have other meaning to Gus Miek's views.

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THE INFLUENCE OF COMPENSATION, JOB SATISFACTION AND ORGANIZATIONAL COMMITMENT ON NURSES' TURNOVER INTENTION AT ACCREDITED HEALTH SERVICES OF EAST LOMBOK REGENCY, INDONESIA

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ABSTRACT

This study focused on a relationship between compensation, job satisfaction and organizational commitment on nurses' turnover intention at Accredited Health Services, East Lombok Regency. The study used census research as a quantitative research design. A sample of 154 non-civil servant service nurses was surveyed at Accredited Health services, East Lombok Regency, West Nusa Tenggara (Indonesia). The questionnaires were analyzed using path analysis by SPSS 16. The results revealed that compensation and job satisfaction had no significant effect on turnover intention. Moreover, compensation and job satisfaction had a significant influence on organizational commitment. Meanwhile, organizational commitment had a significant effect on nurses' turnover intention at Accredited Health Services.

KEY WORDS

Compensation, job satisfaction, organizational commitment, turnover intention, nurse.

Turnover intention often faced by many organizations. Thus, the employee expected to have a new job as soon as possible (Ramlall in Sudita, 2015). The mismatch between work environment and competence, lower work allowance and social security are the main causes. Turnover intention is a tendency to stop working, seek another selected job (Mobley, 1986), and resignation voluntarily or not voluntarily (Robbins & Judge, 2015). An indication is the excessive of absence. Several studies revealed that the causes of turnover intention were lack of compensation (Paulus & TJ, 2015), and job dissatisfaction (Maulana & Cholil, 2016). According to Hasibuan (2012), compensation refers to money and others, either direct or indirect wage as a commendable given by the company.

A survey conducted by American Organization of Nurse Executive showed that the turnover level of Registered Nurse (RN) in 2000 was 21.3%. Meanwhile, 13,9% (Bernard Hodes Group, 2005) on 138 recruiters at health sector, and the vacancy rate at the hospital was 16.1% (Elizabeth, 2012). Lack of nurses causes poor service and fatigue. Turnover is a serious problem to the efficiency and effectiveness of health service. Survey research showed that the average absence rate of nurses at Accredited Health Services, East Lombok Regency was 4.57%. According to Winaya (2011), the absence reporting was above 4-15%. Moreover, it showed that the compensation was IDR 813,168/ month. The phenomenon of the high level of absence of nurses and the low compensation received by nurses made researchers interested in conducting this research. Thus, the study aims to analyze the effect of compensation, job satisfaction and organizational commitment on turnover intention toward non-civil servant service nurses at Accredited Health Services, East Lombok Regency.

LITERATURE REVIEW

According to Mobley (1986), turnover intention is a tendency to resign voluntarily from the previous job and move from one job others based on someone's choices. Mathis &

Jackson (2001) have explained that turnover intention is the process of leaving and replacing the job. It means that when an employee has resigned to his job, the other will replace his position. Robbins (2001) has stated that the resignation of someone from the organization (turnover) can be classified into 2 causes: (1) voluntary turnover is the employee's decision to resign voluntarily; (2) involuntary turnover is an employer's decision to commit uncontrollable work termination for the employee. Mobley et al (1978) and Harnoto (2002) have stated that the indicators were job seeker, resignation and scofflaw.

Compensation refers to salary or gift for employees (Dessler, 2007), it can be financial rewards and allowance (Simamora, 2004). The indicators are wage, salary, and incentive (Simamora, 2004; Luna-Arocas & Camps, 2008). Research conducted by Liu (2012) and Long & Perumal (2014) in the public sector showed that compensation had a negative effect on turnover intention, and these findings contradicted with Irbayuni (2012) which showed that compensation had a positive and significant effect on turnover intention. Furthermore, a case study at PT. Multi Abadi Sejahtera showed that compensation had a significant and positive influence on turnover intention (Paulus & TJ, 2015).

Job satisfaction is employees' perceptions about the importance of working well for the organization (Luthans, 2006). Robbins & Judge (2015) defined it as a general attitude which indicates the difference between the number of rewards received and the amount that should be received. Job satisfaction is measured using four indicators namely job satisfaction, salary satisfaction, satisfaction with the boss's attitude and coworkers (Roelen, Koopmans & Groothoff, 2008).

Robbins (2006) in Putra & Wibawa (2015) has stated that job satisfaction is negatively related to employee turnover. However, other factors such as the labor market, work opportunities, years of service are the obstacles in resignation. A study conducted at higher education (Alniacik et al., 2013) showed that job satisfaction was significantly negatively related to turnover intention. A study by Ozbag & Ceyhun (2013) on Turkish Marine Pilots showed that job satisfaction had a negative effect on turnover intention. Weeks & Sen (2016) indicated that job satisfaction increased, while turnover intention decreased. On the contrary, Paulus & TJ (2015) indicated that job satisfaction had a significant and positive influence on turnover intention. Maulana & Cholil (2016) also indicated that the higher level of job satisfaction not necessarily reducing the intention to move to other job. Meanwhile, a study from Risma (2018) showed that job satisfaction had a negative and no significant effect on turnover intention.

According to Mathis and Jackson (2001), organizational commitment is a trust level, an acceptance labor, and a desire to remain in organization. Choong et al. (2012) have stated that employee will have a strong desire to remain a certain member; he will also put a great effort into his work on behalf of the organization. Meyer and Allen (1991) explained three dimensions of organizational commitment; (1) affective commitment refers to emotional attachment, identification as well as the involvement of an employee in an organization, (2) continuance commitment deals with side-bets orientation concept emphasizes on a person's contribution that can be lost when the person leaves the organization, and (3) normative commitment indicates how far a person psychologically bound to be an employee based on loyalty, affection, warmth, ownership, pride, happiness, and soon.

Mowday et al. (1982) in Putra & Wibawa (2015) have stated that employees with high organizational commitment will be more motivated and strive to achieve organizational goals. Meanwhile, high organizational commitment has a negative relationship with turnover level. Jehanzeb et al. (2013) and Yamazakia & Petchdee (2015) found that organizational commitment had a negative and significant influence toward turnover intention in private sector and fisheries industry, Thailand. In addition, Saraih et al. (2017) found that organizational commitment had a negative and significant relationship toward it in a higher education, Malaysia. On the other hand, the finding showed that organizational commitment had a weak positive significant relationship on turnover intention in Nigerian Paramilitary (Falove, 2014). Moreover, Gamble & Tian (2015) showed that affective and normative commitments were negatively affected turnover intention, and affective commitment had a

positive influence on it. Then, normative and ongoing commitments did not have a significant effect on it, while affective commitment had a significant relationship on it (Sow, 2015).

Thus, the hypotheses are formulated as follows:

- H1: Compensation has a significant negative effect on turnover intention;
- H2: Job satisfaction has a significant negative effect on turnover intention;
- H3: Compensation has a significant positive effect on organizational commitment;
- H4: Job satisfaction has a significant positive effect on organizational commitment;
- H5: Organizational commitment has a significant negative effect on turnover intention.

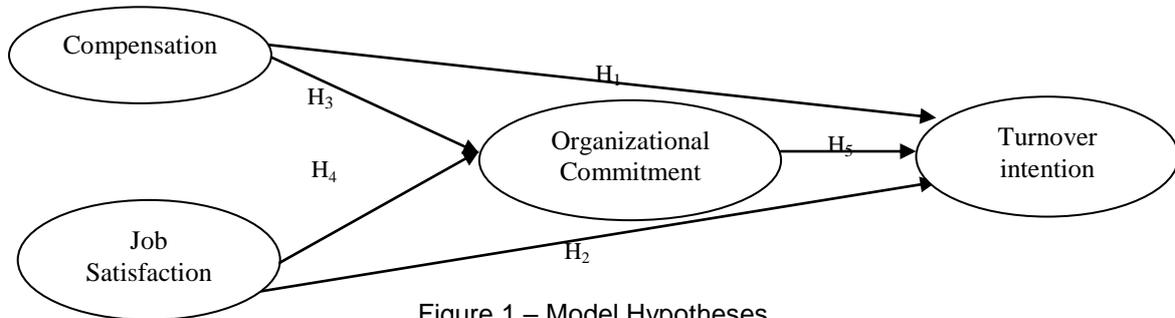


Figure 1 – Model Hypotheses

METHODS OF RESEARCH

This study used quantitative research design with a casual associative approach and it aims to determine the effect of independent variable on the dependent variable. It was conducted at Accredited Health Services, East Lombok Regency. The sample was 154 non-civil servant service nurses. The variables were turnover intention by Paulus & TJ (2015) indicator, compensation by Paulus & TJ (2015) and Luna-Arocas & Camps (2008). Moreover, job satisfaction using indicator from Roelen et al. (2008) as well as organizational commitment using Allen & Meyer (1997) in Risma (2018).

Each variable used a Likert scale, such as strongly agree, agree, partially disagree, disagree, and strongly disagree. The reliability test showed that Cronbach’s Alpha was above 0,6. It means that each item was reliable. Meanwhile, the validity used Pearson Product Moment correlation technique indicated that only job satisfaction variable was invalid, due to r-value is less than 0,3. Meanwhile, path analysis technique was used in this study.

RESULTS AND DISCUSSION

In accordance with the formulated hypothesis, in this study inferential statistical data analysis was measured using SPSS 16, starting from the normality test (Kolmogorov-Smirnov), calculating path coefficients and hypothesis testing (Riduwan and Kuncoro, 2013). Based on the Normality test data shows that all variables are normally distributed (Asymp value. Sig> 0.05).

The normality test is used to test whether the regression model has a normal distribution or not (Ghozali, 2013). In this study, the normality test uses Kolmogorov-Smirnov (one sample K-S) with decision-making that is when p-value> 0.05, then the data is normally distributed. Based on the normality test using Kolmogorov-Smirnov the following results are obtained:

Table 1 – One-Sampel Kolmogorov-Smirnov Test

n/n	Compensation	Job Satisfaction	Organizational Commitment	Turnover intention
N	154	154	154	154
Kolmogorov-Smornov Z	1.154	1.123	1.210	.914
Asymp. Sig. (2- tailed)	.139	.113	.140	.374

Source: Path Analysis.

From the results in the Kolmogorov-Smirnov One-Sample table, the Asymp column. Sig. shows that the significance value for compensation, job satisfaction, organizational commitment and turnover intention is greater than 0.05, it can be concluded that all variables are normally distributed. Kolmogorov-smirnov Z column indicated that the smaller the distribution of the data, the more normal they would be. Path analysis technique was used to analyze the causal relationship among variables in order to find both direct and indirect effects simultaneously or independently of some exogenous for endogenous variables (Riduwan & Kuncoro, 2013).

Table 2 – Result of Path analysis

	Hypothesis	R-Square	Standardized Coefficient Beta	t-statistic	Conclusion
H1	Compensation → Turnover intention	.008	.089	1.101	Not significant
H2	Job Satisfaction → Turnover intention	.000	-.010	-.122	Not significant
H3	Compensation → Organizational Commitment	.086	.293	3.771	Significant
H4	Job Satisfaction → Organizational Commitment	.182	.427	5.825	Significant
H5	Organizational Commitment → Turnover intention	.046	-.213	2.693	Significant

Source: Path analysis. * All significant at $p > 0.000$.

The results showed that compensation had a positive value and did not significantly influence on turnover intention, which meant hypothesis 1 was rejected. The compensation size received by nurses did not affect their desires to move. Thus, it supported the finding from Irbayuni (2012) which indicated that compensation did not contribute to the desire to change the jobs. For instance, employees' expected incentives. Maulana & Cholil (2016) found that salary was not the reason to move. Lum et al. (1998) explained that salary satisfaction was a feeling about how much salary should be received.

The result indicated that job satisfaction had no significant effect on turnover intention, it could be said that hypothesis 2 was rejected. The higher the level of job satisfaction, it was not necessarily reducing the desire to resign. This happened because of salary satisfaction. Unlike the study, Alniacik et al. (2013) and Ozbag & Ceyhun (2013) found that job satisfaction had a significant negative effect on turnover intention. However, this study agreed with Maulana & Cholil (2016) and Risma (2018) shows that job satisfaction had no significant effect on turnover intention.

The third hypothesis showed a positive and significant effect, which meant hypothesis 3 was accepted. The significant correlation between compensation and organizational commitment caused nurses to commit continually to organization. Commitment increased, when a nurse had responsibility and commitment to have self development. Thus, this study supported the finding from Nawab & Bhatti (2011) and Budiningsih et al. (2017), which indicated that there was positive significant correlation between compensation and organizational commitment.

The hypothesis test between job satisfaction and organizational commitment showed positive and significant effect. Thus, hypothesis 4 was accepted. Working indicated how satisfied an employee and it affected organizational commitment. Responsibility made work easier. Moreover, a nurse would have more opportunity to learn new things, responsibility, and challenge to the field of work. When a nurse worked sincerity and responsibility, it would increase organizational commitment. This hypothesis supported the findings from Mohammad & Eleswed (2013), Thabane et al. (2017) and Cherian et al. (2018).

The hypothesis test result between organizational and turnover intention had a negative and significant effect. Thus, hypothesis 5 was accepted. An employee would work continually, due to he agreed, felt useful, and competent to remain in organization. He also felt comfortable, safe, and got benefits. Thus, nurses had homey feel so that turnover intention became low. The findings from Jehanzeb et al. (2013), Yamazakia & Petchdee (2015) and Saraih et al. (2017) showed that organizational commitment had a negative and significant effect on turnover intention.

CONCLUSION

To conclude, compensation had no significant positive effect on turnover intention, and compensation had a significant positive effect on organizational commitment. Then, job satisfaction had a significant positive effect on organizational commitment, while organizational commitment had a significant negative effect on turnover intention. The research limitations focused on three variables namely compensation, job satisfaction, and organizational commitment. Moreover, the sample was taken from non-civil service nurses at Accredited Health Services, East Lombok Regency. Thus, the result of the study may not be applicable to other group other than the ones initially tested.

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**THE INFLUENCES OF REGIONAL CREDIT GUARANTEE (JAMKRIDA),
WORKING CAPITAL, AND GOVERNMENT'S ROLE ON MICRO, SMALL AND
MEDIUM ENTERPRISES (MSMEs) WELFARE IN DENPASAR CITY**

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ABSTRACT

The Micro Small and Medium Enterprises (MSMEs) in Denpasar city faced a various obstacles in developing their business such as limited access to capital or collateral despite having a feasible business, limited working capital conditions and lack of government's role in order to encourage the development of MSMEs. This study aims to analyze the effect of regional credit guarantee, working capital and government's role on income and welfare of Denpasar's MSMEs and welfare of Denpasar's MSMEs through income. The research use Partial Least Square (PLS) approach analysis. The study was conducted on Denpasar city by examining 87 samples from 652 populations. Determination of sample with stratified random sampling. The results of the analysis show that regional credit guarantee, working capital and government's role significantly affect income of Denpasar's MSMEs. Regional credit guarantee, working capital and income affect welfare of Denpasar's MSMEs while government's role has no significant effect on welfare of Denpasar's MSMEs. Regional credit guarantee, working capital and government's role have an indirect effect on welfare of Denpasar's MSMEs through income.

KEY WORDS

MSMEs, regional credit guarantee, working capital, government's role, income, welfare.

The Micro, Small and Medium Enterprises (MSMEs) plays an important role in the strategic role of economic development (Kerry, 2010). Contributions given by MSMEs in economic crisis conditions are considered as a support in the process of national economic recovery, seen from the national economic growth rate and in increasing employment opportunities (Putra, 2013). MSMEs contribute significantly, thus increasing foreign exchange for the country, making this sector emerge as a very strong pillar both in terms of income and in terms of labor (Subramanian, 2012). The development of MSMEs is important to reflect on the condition of MSMEs that are able to survive in times of crisis (Supriyanto, 2006). Therefore, in the development of a strong people's economy, the development of small industries and households is one of the priorities.

Even though MSMEs have a very potential position in the economy, in reality there are still many problems faced. The problems of almost all MSMEs that cannot develop compared to large businesses include lack of capital they have, limited access to funding and the lack of optimal role of the government. The classic and fundamental problem faced by MSMEs is capital. Working capital in a business has a very important role on supporting business activities. Working capital is needed to finance daily operational activities. Expected working capital is expected to be able to return to the company in a short period of time through the sale of production. Working capital originating from product sales will soon be issued again to finance further operational activities. Every business tries to sufficient its working capital needs to increase liquidity and maximize revenue (Kasmir, 2008).

The role of the government is needed by implementing the empowerment of MSMEs so that MSMEs become strong, independent and can develop. Strengthening capital, regional credit guarantee and empowerment of MSMEs implemented by the government have a positive effect on the development of MSMEs, which is reflected in the increase in income, turnover and profits which will have an impact on improving the welfare of MSMEs. This is in line with the research conducted by Inayah, et al (2014), concluding that working

capital loans have a positive effect on the net income of the formal and small-scale businesses. The more working capital loans obtained, the more income that will be obtained by MSMEs. Working capital loans will increase the capital owned by MSMEs, the capital can be used to improve the production process of goods and pay labor wages. With additional capital provided for MSMEs, the income earned will increase, because it can produce goods and absorb more labor. Income levels are often used by economists as a measure of welfare (Supartono et al., 2011).

To find out the level of welfare of MSME actors can be measured by health, economic conditions, happiness and quality of life of the people (Widyastuti, 2012). The success of MSME actors in achieving their goals can be measured by improving their welfare. Social welfare is a nation's system of benefits and services to help the community to obtain social, economic, educational and health needs that are important for the survival of society (Whithaker and Federico in Sasana 2009).

This study aims to analyze the effect of regional credit guarantees, working capital and the role of the government on MSME income, analyze the influence of regional credit guarantees, working capital, the role of government and income to the welfare of MSME actors and analyze the indirect effects of regional credit guarantees, working capital and government roles towards the welfare of SMEs in Denpasar City through income variables. The conceptual framework that describes the relationship between variables in this study, can be seen in Figure 1.

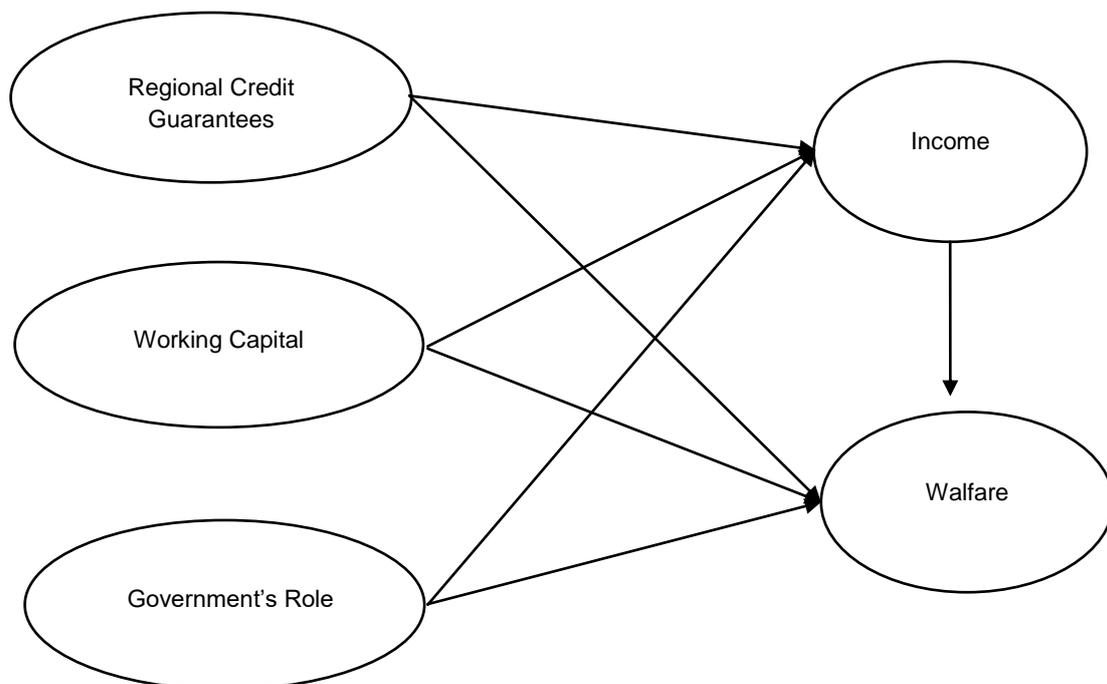


Figure 1 – Conceptual Framework

METHODS OF RESEARCH

This research was conducted in Denpasar City. The reason for choosing this location is that based on existing data, Denpasar City has the most number of MSMEs and uses or obtains credit through the guarantee of PT Jamkrada Bali Mandara at most. The sample was taken as many as 87 respondents from 652 people population. The sample determination method uses the stratified random sampling method. After calculating the sample from each strata, the sample is randomly determined through a computer.

Table 1 – Number of Samples in Each Category or Type of Procurement

No	Category	Number of Samples
1	Trade	78
2	Construction	5
3	Service	3
4	Agriculture	1
Total		87

Source: PT. Jamkrida Bali Mandara, 2017

The basic form used in this questionnaire is close ended questions and scaled response questions. The data analysis technique used to determine the effect of the variables observed in this study, namely the influence of community participation is the Partial Least Square (PLS) technique. The research variables used are Income (Y_1), Welfare (Y_2), Regional Credit Guarantee (X_1), Working Capital (X_2), and Government's Role (X_3).

Structural models (Inner Model) of Endogenous latent variables of income as follows.

$$\eta_1 = \gamma_1\epsilon_1 + \gamma_2\epsilon_2 + \gamma_3\epsilon_3 + \zeta_1 \dots \dots \dots (1)$$

Where: η_1 - Endogenous Variable Income; γ_1 - The coefficient of influence of exogenous variables Credit Guarantee; γ_2 - Coefficient of influence of exogenous variables Working Capital; γ_3 - Coefficient of influence of exogenous variables Community Role; ζ_1 - Model error.

Structural models (Inner Model) of Endogenous latent variables of welfare as follows.

$$\eta_2 = \beta_1\eta_1 + \gamma_6\epsilon_1 + \gamma_7\epsilon_2 + \gamma_8\epsilon_3 + \gamma_9\epsilon_3 + \gamma_{10}\epsilon_3 + \zeta_2 \dots \dots \dots (2)$$

Where: η_2 - Endogenous variables of well-being; β_1 - The coefficient of influence of endogenous variable income; γ_6 - The coefficient of influence of exogenous credit guarantee variables; γ_7 - The coefficient of influence of exogenous variables on working capital; γ_8 - The coefficient of influence of exogenous variables on the role of government; ζ_2 - Model error.

Measurement Model (Outer Model) of Latent Variable of Credit Guarantee:

$$X_{1.1} = \lambda X_{1PM} + \delta_1 \quad (3)$$

$$X_{1.2} = \lambda X_{2PM} + \delta_2 \quad (4)$$

$$X_{1.3} = \lambda X_{3PM} + \delta_3 \quad (5)$$

Latent Variable of Working Capital:

$$X_{2.1} = \lambda X_{4KS} + \delta_5 \quad (6)$$

$$X_{2.2} = \lambda X_{5KS} + \delta_6 \quad (7)$$

$$X_{2.3} = \lambda X_{6KS} + \delta_7 \quad (8)$$

Latent Variable of Government Role:

$$X_{3.1} = \lambda X_{7KS} + \delta_8 \quad (9)$$

$$X_{3.2} = \lambda X_{8KS} + \delta_9 \quad (10)$$

$$X_{3.3} = \lambda X_{9KS} + \delta_{10} \quad (11)$$

Latent Variable of Income:

$$Y_{1.1} = \lambda Y_{1EE} + \epsilon_1 \quad (12)$$

$$Y_{1.2} = \lambda Y_{2EE} + \epsilon_2 \quad (13)$$

$$Y_{1.3} = \lambda Y_{3EE} + \epsilon_3 \quad (14)$$

Latent Variable of Welfare:

$$Y2.1 = \lambda Y5EE + \epsilon_{10} \quad (15)$$

$$Y2.2 = \lambda Y6EE + \epsilon_{11} \quad (16)$$

$$Y2.3 = \lambda Y7EE + \epsilon_{12} \quad (17)$$

RESULTS AND DISCUSSION

Based on the results of the analysis of total influence testing as presented in the Table 2, it shows that regional credit guarantees, working capital and government roles have a significant positive effect on welfare and regional credit guarantees, working capital and government roles have a significant positive effect on income.

Table 2 – Effect of Total / Total Effect of Research Variables

Relationship	Original Sample (O)	Sample Mean (M)	Standard Error (Sterr)	T Statistic (O)/Sterr)	P Values
PKD (X1) → PDP (Y1)	0,324	0,329	0,086	3,743	0,000
PKD (X1) → KSJ (Y2)	0,386	0,354	0,092	3,872	0,000
MK (X2) → PDP (Y1)	0,249	0,247	0,090	2,771	0,003
MK (X2) → KSJ (Y2)	0,319	0,323	0,100	3,206	0,003
PP (X3) → PDP (Y1)	0,335	0,337	0,078	4,305	0,000
PP (X3) → KSJ (Y2)	0,242	0,245	0,096	2,535	0,001
PDP (Y1) → KSJ (Y2)	0,340	0,334	0,087	3,930	0,000

Source: Data processed, 2018.

Based on the results of the analysis using SmartPLS Version 3.00 the role of the government variable does not have a significant direct effect on the income variable, seen from the t-statistic value of 1,270, which is smaller than 1.65 and p value 0.102, greater than the error used 0.1. The income variable is significantly positive for the welfare variable. This means that the greater the income generated, the higher the welfare of MSME actors, and vice versa the smaller the income generated, the lower the welfare of MSME actors.

Regional credit guarantee, working capital and government roles have significant indirect effects on welfare variables through income, which means that the greater regional credit guarantees, working capital and the role of government, the higher the welfare received by MSME actors, and vice versa the smaller the regional credit guarantee received, the lower the welfare received by MSME.

With additional capital provided for MSMEs, the income earned will increase, because it can produce goods and absorb more labor. Besides that, the results of this study also support the theory of Kasmir (2011) which states that credit can positively increase income because credit can increase business capital.

The interview conducted with Ni Luh Gede Meigaratna Sari, MSME perpetrators on May 20, 2018 in Denpasar said:

'I am very grateful to be able to get credit with guarantee assistance from PT. Jamkrada Bali to develop my business in the field of fashion, namely traditional Balinese clothing. The loan is used to buy Balinese kebaya products which currently have creative and varied models and designs. Bali kebaya fabric is quite good prospect because it is always used for prayers and various traditional ceremonies in Bali. So there are always buyers. If a lot of buyers definitely add to our income'.

I Made Gede Dharmendra on May 27, 2018 in Denpasar said:

'Credit that I get is used to increase capital in the building material store that I manage. The capital is used to buy building materials or materials and then sell again. This business needs big capital but is profitable because people who build don't know the season so they can build and quite fortunately anytime'.

The results of interviews with providers show that credit guarantees obtained affect business development. With additional capital, MSME actors can attract greater business opportunities such as buying production equipment, buying raw materials or buying items to be resold. Increased production activities will affect the increase in income of MSME players.

The interview conducted with Gde Budi Dwipayana, Head of Guarantee for PT Jamkrida Bali on May 23, 2018 in Denpasar said:

'As a regional guarantee institution, we want to provide the maximum benefit to the community, but guarantee activities especially for productive business activities have a higher risk than non-productive so we have to be more prudent. We want to provide as much access as possible to MSMEs but remain cautious in providing guarantees. Don't let PT. Jamkrida, which must solve problems, creates new problems because many debtors are defaulted. Usually in terms of socialization, we do not run into socialization to the mass media but usually to places where most people have productive businesses that are worthy of being guaranteed'.

The interview results show that PT. Jamkrida Bali strongly supports the flexibility of access for MSME players in obtaining business capital. Various efforts have been carried out such as having a very strategic office in the center of Denpasar City, the breadth of a network of cooperation with banks or non-bank institutions in all districts / cities throughout Bali, as well as continuous and sustainable socialization to the regions. Good access will increase public interest in obtaining credit guarantees through PT. Jamkrida. But in this effort, PT. Jamkrida also applies the aspect of prudence in providing credit guarantees in accordance with applicable regulations. It is also evident in the outreach approach that was carried out not through communication media to disseminate information but directly targeting places that were potentially good for channeling guarantees.

The working capital variable measured here has indicators including cash turnover, inventory turnover and account receivable turnover. This is due to sufficient working capital that can be used to meet all operational needs in business, such as buying raw materials, employee salaries, retail goods, etc. that can increase business productivity and produce maximum profits so that it can be distributed to achieve the standard of living feasibility perceived by the public.

The Regional Government is required to provide better service and empower the community so that the standard of living of the people is guaranteed and certainly can improve the welfare and progress of the region (Sadid 2012). In improving the welfare of rural communities, the Village Government must be made aware of and cared for. The results of the analysis of this study indicate that the role of the government does not significantly affect the welfare of MSME actors in Denpasar City.

Many government policies have directly touched MSMEs such as the People's Business Credit (KUR) distribution program, where KUR funds channeled to the public are increasing year by year. Efforts are being made to boost KUR distribution in 2018 by reducing interest rates from 9% to 7%. In addition to lowering credit interest, the government also decided to increase the KUR distribution portion for the production sector by 50% of the total KUR target of 120 trillion. From the results of the study, most MSMEs in Denpasar City already knew about the KUR program through various socialization activities carried out by the Central Government, Regional Governments and KUR channeling banks.

The programs initiated by the Government have varied for alignments to MSMEs but have not been sufficiently integrated so that they have not provided optimal results. More intensive coordination and collaboration between government agencies in the whole process from planning, budgeting, implementation to monitoring and evaluation related to MSMEs are needed. It is hoped that the Government will not be trapped in sectoral egos, organizational egos or their respective ego programs. Because basically all the problems in the community are cross-sectoral and even cross-regional. On the other hand, in addition to the government's role, it takes an active role for banks and State-owned enterprises or regional owned enterprises to facilitate coaching, banking access, and other activities.

Besides that, the programs that are lack of attention are followed up on throughout the process. Government apparatus should emphasize the follow-up of the results of monitoring and evaluation or coaching so that it can be clearly known the inequality, inefficiency, and ineffectiveness on carrying out operational activities. Follow-up is an improvement activity for the program that is carried out so that in the future the program implemented can be implemented even better.

Furthermore, the MSMEs of Denpasar City can develop and be highly competitive so as to produce reliable MSMEs in global competition, it is necessary to have innovative, sustainable and inclusive policies and programs. Economic growth should be felt by all levels, so it is important to make new initiatives to reduce the welfare range in Denpasar City.

Segel and Bruzy in Widyastuti (2012), also explained that welfare can be measured by health, economic conditions, happiness and quality of life of the people. The middle-class community welfare can be represented by the level of life of the community which is characterized by the absence of poverty, a better level of health, higher levels of education and productivity of the community (Todaro, 2000). The relationship between income and welfare of members is if economic growth or income is good then the level of community welfare will also increase.

CONCLUSION AND RECOMMENDATIONS

The higher the regional credit guarantee obtained and the higher the working capital owned, the higher the income earned. While the government's role negatively affects the income of SMEs in Denpasar City. The higher the regional credit guarantee obtained, the higher the working capital owned, the greater the role of the government carried out and the higher the income obtained, the higher the welfare obtained. Regional credit guarantees, working capital and the government's role indirectly influence income through the welfare of MSME actors in Denpasar City.

Government should be more active in providing guidance to MSMEs to improve their human resource capabilities by conducting training, workshops, and technical guidance that is in line with the needs of MSMEs. The development of MSMEs can be carried out in synergy with the regional apparatus in the Regional Government, cooperating with State Owned Enterprise of Indonesia, private institution, and university. The government should give priority in developing MSMEs by providing clear planning, budgeting and human resources placement so that intensive guidance can be carried out thoroughly and given the importance of MSMEs in increasing regional economy. With guidance it is hoped that MSMEs will not run stagnant but rise in class and have high competitiveness. Besides that, guidance from the Government is also to encourage the growth of new MSMEs. Whereas for MSME, it is suggested that increasing participation in term of government program to support MSMEs development.

This study has several limitations, namely in this study the object of research is the MSMEs of Denpasar City who received a guarantee program from PT. Jamkrida Bali, so that it has not accommodated the perceptions of SMEs throughout Bali. There are still many variables that can affect the income and welfare of MSME actors. Future research is expected to increase the number of research variables used.

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**LOCAL WISDOM PRACTICES OF DAYAK INDIGENOUS PEOPLE
IN THE MANAGEMENT OF TANA' ULEN IN THE KAYAN MENTARANG NATIONAL
PARK OF MALINAU REGENCY, NORTH KALIMANTAN PROVINCE, INDONESIA**

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ABSTRACT

This study employed a qualitative approach to examine the local wisdom of indigenous peoples, specifically of the Dayak Kenyah indigenous people in the management of *Tana' Ulen* in the Kayan Mentarang National Park of Malinau Regency, North Kalimantan Province. The study included the practice of local wisdom in the management of *Tana' Ulen* in Kayan Mentarang National Park and the impact of local wisdom practices on deforestation. The local wisdom practices of the Dayak Kenyah indigenous people are arranged in customary rules and in the form of various ritual activities with the aim of maintaining the sustainability of *Tana' Ulen* and a balance between forest ecosystems with the social life of indigenous peoples. The impact of the local wisdom practices of the Dayak Kenyah indigenous people in the management of *Tana' Ulen* in the Kayan Mentarang National Park on forest destruction could be identified from the existence of forest utilization zones to limit forest use that may lead to massive forest destruction. In addition, forests are managed wisely under the customary law to improve the economy of the community by taking forest products sustainably under strict regulations of customary law and local wisdom practices.

KEY WORDS

Local wisdom, Tana' Ulen, Dayak Kenyah.

Culture and local wisdom are very closely related to society, meaning that everything is influenced by the culture of the community. Culture can be interpreted as a system of knowledge that includes systems of ideas or the ideas contained in the human mind so that in everyday life, the culture is abstract. While the embodiment of cultural objects is created by humans as being cultured, and the behavior of objects that are tangible, such as patterns of behavior, language, equipment life, social organization, religion, art, and such like, which all intended to help sustain life in human society.

Local wisdom refers to local knowledge (the invention of tradition), representing a set of actions or actions which are usually determined by acceptable rules and certain values and norms of behavior by repetition, which automatically implies continuity with the past. Empirically, indigenous peoples' beliefs manifested as local wisdom are able and effective to control human behavior that tends to control and exploit natural resources arbitrarily. In this regard, it is unwise to denounce and discredit the mindset and actions of indigenous peoples who consciously defend their values, religion, traditions, and norms of customary law to maintain the magical balance and social order of their community and the surrounding environment. We must appreciate and learn from the local wisdom of these indigenous people in the management of our nature and environment to make it more humane.

One manifestation of the local wisdom in natural resource management is the management of *Tana' Ulen* by the indigenous people of Dayak Kenyah in the village of Long Alango, Bahau Hulu District, Malinau Regency. *Tana' Ulen* in the language of the Dayak Kenyah people means an area that has been banned or has been imposed by someone's rights so other people must not enter the area. Physically, *Tana' Ulen* is a primary forest area

along with certain watersheds that are rich in natural resources of high economic value to the local community and located not too far from the village. In the concept of *Tana' Ulen*, the river was originally a prohibited area for the community to freely catch fish; this was done to ensure the availability of fish and other preys during festive occasions or when guests were visiting the village. In addition, in the *Tana' Ulen* area, people are prohibited from cutting down trees, burning trees, opening fields, and carrying out other activities that cause forest destruction. Originally, *Tana' Ulen* was owned only by nobles in Long Alango, Long Uli, and Long Pujungan in Malinau Regency, North Kalimantan Province. The existence of *Tana' Ulen* in Long Alango represents the effort of the indigenous people to maintain environmental sustainability by imposing strict regulations in the utilization of forest products. The products that can be taken by the Dayak Kenyah people include *gaharu* (a kind of tree whose sap can be used for perfume), rattan, *Kayu Wangi*, fruits, fish, and animals. The indigenous people can use these forest products at certain times only and for public purposes. Personal consumption of forest products, such as fish, vegetables or animals, can be done yet in limited quantities.

In its journey, in 1980, the upstream area of the Kayan River up to the Mentarang River, covering an area of 1,360,500 ha, was designated as a nature reserve based on the Decree of the Minister of Agriculture Number 847/Kpts/Um/II/1980. However, in 1990, DG PHPA in collaboration with WWF-Indonesia and LIPI prepared a management plan for the Kayan Mentarang area. A survey conducted by WWF and LIPI found a very high dependence of Dayak indigenous communities on forests. Thus, from 1992 to 1994, WWF and the Head of Pujungan District issued a recommendation that each village have *Tana' Ulen* and they proposed that Kayan Mentarang be converted into a National Park. This effort paid off on October 7, 1996, when the Kayan Mentarang Nature Reserve officially became the Kayan Mentarang National Park based on the Decree of the Minister of Forestry Number 631/ Kpts-/1996. This change has become a breath of fresh air for the Dayak indigenous people and for the existence of *Tana' Ulen*. Communities can stay in the area and utilize certain natural resources according to the regulations of *Tana' Ulen* in each village.



Figure 1 – The Map of the Kayan Mentarang National Park

In addition to the above regulations, there is also the Malinau Regional Regulation Number 4 of 2007 concerning Malinau as a Conservation Regency. This means that Malinau is a natural conservation area consisting of native ecosystems and/or unique ecosystems having characteristics in the form of diversity and/or uniqueness of species of plants and animals both on land and in waters, whose function is to protect life support systems, preserve biodiversity, and maintain sustainable use of biological natural resources and their

ecosystems. In accordance with this definition, the Kayan Mentarang National Park is designated as a conservation area, whose function is to protect life support systems, preserve biodiversity, and maintain sustainable use of biological natural resources and their ecosystems. Based on this description, this study aims to describe and analyze the practice of local wisdom of the Dayak Kenyah indigenous people in the management of *Tana' Ulen* in the Kayan Mentarang National Park.

THEORETICAL REVIEW

Local wisdom is one manifestation of culture as a system that tends to preserve the tradition as a means to solve problems often faced by local communities in their daily life. In the context of the management of natural resources and the environment, the community manifests local wisdom in the form of conservation activities. Nababan and Suhartini (2009) put forward the principles of conservation of natural resource management traditionally as follows:

- Respect that encourages harmony in the relationship of human beings with the surrounding environment—in this case, traditional society tends to view itself as part of nature;
- An exclusive sense of belonging over a certain area or type of natural resource as communal property resource that it binds all people to maintain and secure this shared resource from outside parties;
- The local knowledge system, which gives the community the ability to solve the problems they face in utilizing limited natural resources;
- Adaptation power in the use of simple and appropriate technology that also saves energy in accordance with local natural conditions;
- The allocation system and enforcement of customary rules that can secure shared resources from excessive use, both by the community itself and by outsiders (migrants), through customary law institutions that regulate all aspects of community life in a particular social entity; and
- Equity mechanisms (distribution) of crops or shared resources that can prevent excessive gaps in traditional communities to occur, so there is no jealousy or social outrage or use of resources outside the applicable traditional rules.

Local wisdom is a term often used by scientists to represent a system of values and norms that are compiled, believed, and implemented by local communities based on their understanding and experience in synergy with the surrounding environment (Tjahjono *et al.*, 1999; Prijono, 2000a; Prijono, 2000b).

According to Mitchell *et al.* (2000) and Soemarwoto (1999), local communities have developed an understanding of the ecological system in which they live. Human beings regulate the exploitation of the biophysical environment carefully through certain social laws based on empirical experience. Violations will result in sanctions, either from the community or from God. With this regulation, over-exploitation of the biophysical environment can be avoided such as exploitation of forest resources.

Local wisdom has a strong socio-cultural dimension, usually developing from human activities in life. Local wisdom is reflected in various forms, such as ideas, values, norms, and cultural conventions; in social life, it can be religious systems, social systems and organizations, knowledge systems, livelihood systems, and systems of technology and equipment (Koenjaraningrat, 2008). Literally, Echols and Syadily (2001) explain that local wisdom is a local idea of good values and prudence that can be followed by community members. Thus, local wisdom is a dynamic source of knowledge and it experiences continuous developments by certain populations in an integrated manner with an understanding of the surrounding culture and nature (Caroline Nyamai-Kisia, 2010).

Local communities have a very strong motive in maintaining their forests when compared to outsiders who tend to have other interests. Indigenous people who live on the outskirts of the forest and in the forest have to preserve the forest for the survival of the community as indigenous commodities. Two factors drive their motivation. *First*, it is related

to the belief in the rights of origin inherited from generation to generation. Indigenous peoples are different from other community groups because they have original or traditional rights. Maintaining customary forests represents not only their concern on conservation but also actions in defending customary rights, inherited rights, and traditional rights passed down by their ancestors. *Second*, in addition to maintaining rights, indigenous people gain enormous benefits if their customary forests remain intact and are managed in a sustainable manner. Conversely, if there is damage to customary forests, by indigenous peoples or other parties, indigenous people are the party suffering the most (Nababan, 2002).

The view that humans are part of nature and a belief system that emphasizes respect for the environment according to Mithcell *et al.* (2000) is a very positive value for environmental preservation and the concept of sustainable forest resource management. Because people in forest areas, according to Sumardi (1997), still cling to their inherited traditional norms and, even though they are dependent on forests so much, it does not lead them to exploit forests on a large scale for commercial purposes. The indigenous communities see their forests as a sacred place of magical values that influence their cultural systems and social systems. Forests are considered not only as a physical environment but also to have their own spirits and these spirits protecting the forests may harm the surrounding communities shall they be treated badly (Tjahjono *et al.*, 2000).

According to Law Number 41/1999 concerning Forestry, forests are an ecosystem in the form of landscapes containing biological resources of trees inseparable of their environment. These forests are grouped into several types, as follows. (1) A state forest refers to any forest on a land without a private land title. In other words, the state forest is the forest on public land. (2) A private forest refers to any forest situated on land with a title. (3) A customary forest is a state forest that is located in the territory of customary law communities. (4) A production forest is a forest area that functions to produce forest products. (5) A protected forest is a forest area that functions to protect the life support system, including to regulate the water system, to prevent floods, to control erosion, to prevent seawater intrusion, and to maintain soil fertility.

Many definitions have been put forward on Sustainable Forest Management (SFM). However, of all that, one universal definition is widely agreed upon between countries, i.e. the concept adopted by the United Nations Forum on Forests (UNFF) in December 2007. According to UNFF (2007) sustainable forest management is a dynamic and evolving concept that aims to maintain and enhance the economic, social, and environmental value of all types of forests, for the benefit of present and future generations.

Sustainable Forest Management has three characteristics, namely: (1) sustainability of production and forest service/benefits; (2) preservation of the physical environment of the forest (land, flora, fauna, hydrology, and climate); and (3) preservation of the social environment of the community (including social, economic and cultural) (Lindenmayer *et al.*, 2000; Sheppard and Meitner, 2005; Siry *et al.*, 2005; Kastanya, 2006). In more detail, UNFF (2007) explains seven (7) elements in sustainable forest management, namely (1) extent of forest resources, (2) forest biological diversity, (3) forest health and vitality, (4) productive functions of forest resources, (5) protective functions of forest resources, (6) socio-economic functions of forests, and (7) legal, policy, and institutional framework.

Forest management policies in Indonesia are changing, during the Old Order era, the New Order era, and the Reformation era. In the previous two orders, forest management was centralized, yet it was decentralized in the Reformation era. These policy changes directly affect the rate of deforestation and land degradation as well as rehabilitation programs. Nawir and Rumboko (2008) divided forest management policies in Indonesia over the past fifty years into four main periods with their respective priorities. The first period was from the 1950s to 1975 with the focus on expanding agriculture. The second was from 1975 to the 1990s with the focus on issuing *Hak Pengusahaan Hutan* (HPH) or Forest Concession Rights. The third period was from the 1990s to 1997, with the focus on forest management outside of the forest area. The last period was from 1998 to the present, a decentralized form of forest management in line with the enactment of the Regional Autonomy policy.

Sustainable Forest Management is needed to prevent and lower deforestation. In general, cases of deforestation in Indonesia occur because the policies on forest management are centralized and exploitative, with the main focus to increase foreign exchange. As a result, almost half of Indonesia’s forest area has been fragmented by road networks, other access routes, and various development activities, such as the construction of plantations and industrial plantations (Forest Watch Indonesia and Global Forest Watch, 2001) (Figure 2).

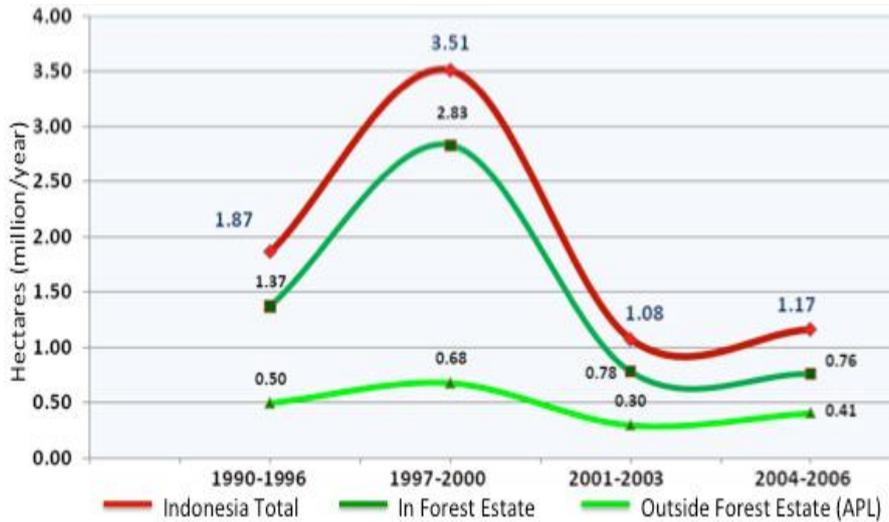


Figure 2 – The Rate of Deforestation in Indonesia (FAO, 2010; Dokumen Rencana Investasi Kehutanan Indonesia, 2012)

Table 1 – Deforestation and Degradation due to Planned and Unplanned Activities

Sources of Greenhouse Gas Emissions		Causes
Deforestation and Forest Loss	Planned	Expansion of administrative/regional government areas for infrastructure and other needs Lawful forest conversion (based on City Spatial Planning) Forest conversion to land allocated for other purposes Forest conversion for mining concessions (for example copper, gold, silver, nickel, and tin) Forest conversion for plantations (for example oil palm, rice fields, rubber, coffee, and cacao)
	Unplanned	Illegal occupancy of forests for timber, firewood, agriculture, and small-scale mining Uncontrolled forest fires Land ownership that causes conversion of forest areas
Forest Degradation	Planned	<i>Peretujuan Izin Usaha Pemanfaatan Hasil Hutan Kayu Hutan Alam (IUPHHK-HA)</i> of Business Permit to Utilize Timber Forest Products in Natural Forest <i>Peretujuan Izin Usaha Pemanfaatan Hasil Hutan Kayu Hutan Tanaman Industri (IUPHHK-HTI)</i> or Business Permit for Primary Industry of Forest Products in Industrial Plantation Forest
	Unplanned	Logging outside of allowable felling Illegal logging Small forest fires due to natural factors Small forest fires for land clearing
	Unplanned	Illegal occupancy of forests for timber, firewood, agriculture, and small-scale mining Uncontrolled forest fires Land ownership that causes conversion of forest areas
Forest Degradation	Planned	<i>Peretujuan Izin Usaha Pemanfaatan Hasil Hutan Kayu Hutan Alam (IUPHHK-HA)</i> of Business Permit to Utilize Timber Forest Products in Natural Forest <i>Peretujuan Izin Usaha Pemanfaatan Hasil Hutan Kayu Hutan Tanaman Industri (IUPHHK-HTI)</i> or Business Permit for Primary Industry of Forest Products in Industrial Plantation Forest
	Unplanned	Logging outside of allowable felling Illegal logging Small forest fires due to natural factors Small forest fires for land clearing

Source: Good Practice Guidance for LULUCF (2003), in DRIKI (2012).

Good Practice Guidance for LULUCF (2003) in DRIKI (2012) mentions the government of Indonesia distinguishes deforestation into planned and unplanned. The loss of areas taken from state-owned forests for non-forest land uses is considered planned deforestation. Deforestation and forest loss, as well as planned and unplanned land degradation, are shown in Table 1.

CONCEPTUAL FRAMEWORK

Empirically, indigenous peoples' beliefs manifested as local wisdom are able and effective to control human behavior that tends to control and exploit natural resources arbitrarily. In this regard, it is unwise to denounce and discredit the mindset and actions of indigenous peoples who consciously defend their values, religion, traditions, and norms of customary law to maintain the magical balance and social order of their community and the surrounding environment. We must appreciate and learn from the local wisdom of these indigenous people in the management of our nature and environment to make it more humane.

In accordance with the nobility of local wisdom of the indigenous people, the indigenous people of Dayak Kenyah in the village of Long Alango, Bahau Hulu District, Malinau Regency have preserved the principle of natural resource management for centuries, known as *Tana' Ulen*. *Tana' Ulen* in the language of the Dayak Kenyah people means an area that has been banned or has been imposed by someone's rights so other people must not enter the area. Physically, *Tana' Ulen* is a primary forest area along with certain watersheds that are rich in natural resources of high economic value to the local community and located not too far from the village.

Since 1980, the upstream area of the Kayan River up to the Mentarang River, covering an area of 1,360,500 ha, was designated as a nature reserve based on the Decree of the Minister of Agriculture Number 847/Kpts/Um/II/1980. This effort paid off on October 7, 1996, when the Kayan Mentarang Nature Reserve officially became the Kayan Mentarang National Park based on the Decree of the Minister of Forestry Number 631/Kpts-/1996. In addition to these regulations, there is also the Malinau Local Regulation Number 4 of 2007 concerning Malinau Regency as a Conservation Regency.

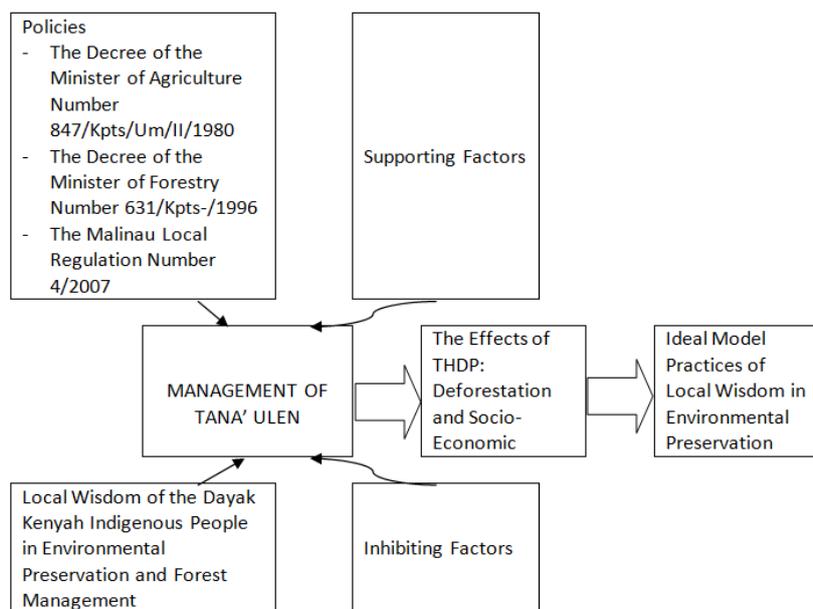


Figure 3 – Conceptual Framework

Land management in the Kayan Mentarang National Park cannot be separated from the role of several parties. The government of North Kalimantan Province is committed to

respect, protect, and preserve the values and cultural practices of indigenous tribes living around the Kayan Mentarang National Park in North Kalimantan. Only one regional government, i.e. Malinau Regency, in the Province of North Kalimantan has a regional regulation on the protection of territories and indigenous people so far. Aside from the government's role in environmental conservation in the Kayan Mentarang National Park, Non-Government Organizations (NGOs), such as WWF Indonesia, also collaborate with stakeholders, namely the Ministry of Forestry through the Directorate General of Forest Protection and Nature Conservation, local government, local communities and International Institutions, to utilize important assets and at the same time to find new models in the management of the National Park.

In the management of *Tana' Ulen* as local wisdom in conservation activities, there are supporting and inhibiting factors. Through a qualitative study, the researchers identified these factors to create a (qualitative) model of local wisdom practices that can preserve the environment.

METHODS OF RESEARCH

This study involved local wisdom of indigenous peoples, especially the Dayak Kenyah indigenous people in the management of Tana' Ulen in the Kayan Mentarang National Park, Malinau Regency, North Kalimantan Province. The study included practices of local wisdom in the management of Tana Ulen in Kayan Mentarang National Park and the impact of such practices on deforestation.

This study employed a qualitative approach aiming at describing comprehensively the object studied in the Dayak Kenyah indigenous community and specifically the communities living around the Kayan Mentarang National Park. The collected data were tested for validity and reliability using credibility tests (internal validity), transferability (external validity), dependability (reliability), and confirmability (objectivity). Then the data was analyzed using the Interactive Model method (Miles *et al.*, 2014), with a data analysis component consisting of data collection, data condensation, data display, and conclusions. The interactive model in data analysis is shown below.

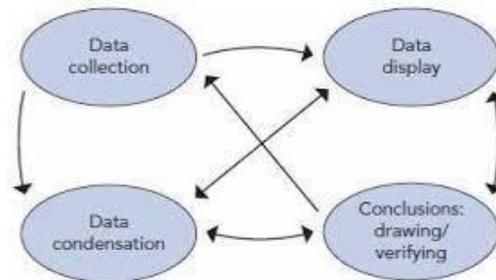


Figure 4 – Components of Data Analysis: Interactive Model (Source: Matthew B. Miles et al., *Qualitative Data Analysis: A Methods Sourcebook*. Singapore: SAGE Publications Inc., 2014:33)

RESULTS AND DISCUSSION

Local Wisdom Practices of Dayak Kenyah Indigenous Peoples in the Management of Tana' Ulen in the Kayan Mentarang National Park. Among the Dayak Kenyah indigenous people, the practice of local wisdom is manifested in the management of Tana' Ulen in the Kayan Mentarang National Park. The practice includes customary rules, activities to preserve forests, and utilization of Tana' Ulen forest products. Local people have certain rules for generations and the rules are still practiced these days. One customary rule that applies is that indigenous people are permitted to utilize forest products from Tana' Ulen for certain events such as Thanksgiving or weddings. However, it can only be done once a year.

Tana' Ulen as a protected area has certain strict regulations. Violations will bring sanctions and fines, such as paying with jars (*tempayan*), gongs, decorative machetes (*baing*

sua), or money, and confiscation of tools and goods as the results of violations. Another rule applied is that utilization forest products from Tana' Ulen must be upon permission from the Village Head and Customary Head. The customary regulations of the Dayak Kenyah indigenous people also apply to communities outside of the Dayak Kenyah. The regulation is related to the prohibition of outsiders to enter and take forest products of Tana' Ulen; violations will result in certain sanctions imposed in accordance with the Customary Rules.

The existence of various rules represents local wisdom as one of the cultural investments in local communities. Koenjaraningrat (2008) writes that Local wisdom can be reflected in various forms, such as ideas, values, norms, and cultural conventions; in social life, it can be religious systems, social systems and organizations, knowledge systems, livelihood systems, and systems of technology and equipment. The indigenous communities see their forests as a sacred place of magical values that influence their cultural systems and social systems. Forests are considered not only as a physical environment but also to have their own spirits and these spirits protecting the forests may harm the surrounding communities shall they be treated badly (Tjahjono *et al.*, 2000).

The Dayak Kenyah people basically maintain Tana' Ulen through their local wisdom to preserve forests. Because people in forest areas, according to Sumardi (1997), still cling to their inherited traditional norms and, even though they are dependent on forests so much, it does not lead them to exploit forests on a large scale for commercial purposes.

Local people around Kayan Mentarang National Park are also directly involved in management—they are inseparable of the management of the National Park because they have a stronger inner bond compared to outsiders in general. This inner bond arises because of the association of local communities with their ancestral lands. Nababan (2002) states local communities are different from other community groups because they have traditional or customary rights. Maintaining customary forests represents not only their concern on conservation but also actions in defending customary rights, inherited rights, and traditional rights passed down by their ancestors.

Based on the description, it can be concluded that if the customary rules of the Dayak Kenyah indigenous people are still preserved, then the customary rules related to forest management can also be preserved as part of sustainable development.

Activities Related to the Protection of Tana' Ulen. In the management of Tana Ulen, the Dayak Kenyah indigenous people have some activities like the prohibition for other communities to enter protected forest areas. The prohibition is marked with a sign (SIP) of *parang* or *Mandau* made of wood mounted on certain trees in Tana' Ulen for people to easily see the sign and remember that the area is protected. The Dayak Kenyah indigenous people do this to maintain the integrity of the protected area by prioritizing their local wisdom. Related to this, Mitchell *et al.* (2000) and Soemarwoto (1999) state local communities have developed an understanding of the ecological system in which they live.

Another activity to protect Tana' Ulen is the prohibition of activities that can damage forest sustainability. This is in line with the Regulation Number 32/2009 concerning the purpose of environmental protection and management. The objectives are (1) to protect the territory of the Republic of Indonesia from pollution and/or environmental damage; (2) to guarantee safety, health, and human life; (3) to guarantee survival guarantee the survival of living things and ecosystem sustainability; (4) to maintain the preservation of environmental functions; (5) to achieve harmony and environmental balance; (6) to guarantee justice for present and future generations; (7) to guarantee the fulfillment and protection of environmental rights as part of human rights; (8) to control the use of natural resources; (9) to realize sustainable development; and (10) to anticipate global environmental issues.

Based on the description, it can be concluded that if indigenous people keep protecting Tana' Ulen continuously, they will be able to preserve the forests without overruling the ancestral beliefs.

Utilization of Forest Products in the Kayan Mentarang National Park. The utilization of forest products from the Kayan Mentarang National Park is carried out according to the needs of the Dayak Kenyah indigenous people—this ensures that they get benefits from forest products based on prevailing customary regulations. The Dayak Kenyah people use

forest products such as rattan, black honey, wood, and others. Indigenous people have known and utilized forest products in their daily life for generations in accordance with customary law. Sumanto and Mariana (2014) confirm that there is close social interaction and interdependence between indigenous Dayak Kenyah people with their environments in which they take the forest products and at the same time maintain the sustainability of natural resources.

Based on the discussion, the following proposition can be formulated: if customary rules and traditional activities are carried out continuously, the use of forest products will be beneficial for the welfare of the community and can create a sustainable environment.

The Impact of Local Wisdom Practices of Dayak Kenyah Indigenous People in the Management of Tana' Ulen in the Kayan Mentarang National Park on Forest Conservation. The local wisdom practiced by the indigenous people in managing Tana' Ulen in the Kayan Mentarang National Park aims at preserving the forests. This shows efforts to manage natural resources and the environment as a manifestation of forest conservation by the community. In this regard, Suhartini (2009) put forward the principles of conservation of natural resource management traditionally as follows:

- Respect that encourages harmony in the relationship of human beings with the surrounding environment—in this case, traditional society tends to view itself as part of nature;
- An exclusive sense of belonging over a certain area or type of natural resource as communal property resource that it binds all people to maintain and secure this shared resource from outside parties;
- The local knowledge system, which gives the community the ability to solve the problems they face in utilizing limited natural resources;
- Adaptation power in the use of simple and appropriate technology that also saves energy in accordance with local natural conditions;
- The allocation system and enforcement of customary rules that can secure shared resources from excessive use, both by the community itself and by outsiders (migrants), through customary law institutions that regulate all aspects of community life in a particular social entity; and
- Equity mechanisms (distribution) of crops or shared resources that can prevent excessive gaps in traditional communities to occur, so there is no jealousy or social outrage or use of resources outside the applicable traditional rules.

Local wisdom in the Dayak Kenyah indigenous people is realized in the form of (1) utilization of natural resources, like *gaharu*, rattan, cinnamon, fruits, and preys, must get permission from the Customary Head; and (2) prohibitions in hunting, which can damage the sustainability of the National Park. Local wisdom has an impact on the welfare of the surrounding community. The forests can fulfill water needs for rice fields as part of the sustainability of livelihoods of the local community and fulfill the needs of wood construction materials for settlement. Therefore, the local wisdom of the Dayak Kenyah indigenous people in forest management must be preserved as an effort to maintain the sustainability of livelihoods and building materials.

Based on the discussion, the following proposition can be formulated: wisdom rooted strongly for generations and carried out with a high commitment to conservation and economy will help to balance the ecological and economic functions of the forest.

Forest Sustainability and Efforts to Overcome Impacts on Local Community Socio-Economic Conditions, Especially Those Living around the National Park. According to UNFF (2007), sustainable forest management is a dynamic and evolving concept that aims to maintain and enhance the economic, social, and environmental value of all types of forests, for the benefit of present and future generations. The existence of Tana' Ulen forests also increases economic, social, and environmental values. Economically, forests help to improve the economy of the surrounding community, in which forest products can meet the needs of the local community and the small amount of it can be sold. From a social standpoint, harmony, cooperation, and mutual respect exist among the indigenous people. Furthermore, Tana' Ulen is an educational object, both for Indonesian citizens and foreigners.

In its development, Tana' Ulen provides a new paradigm of forest management, i.e. taking benefits from forests without destroying forests. Violations of the rules in the management of Tana' Ulen will result in sanctions from the community and from God. The presence of outsiders into the Tana' Ulen forest area has raised concern for the people around the forest since they are worried about the sustainability of indigenous culture preserved so far. Therefore, certain efforts need to be made to overcome the problem. Sustainable Forest Management has three characteristics, namely: (1) sustainability of production and forest service/benefits; (2) preservation of the physical environment of the forest (land, flora, fauna, hydrology, and climate); and (3) preservation of the social environment of the community (including social, economic and cultural) (Lindenmayer *et al.*, 2000; Sheppard and Meitner, 2005; Siry *et al.*, 2005; Kastanya, 2006).

The efforts to overcome the impact on the socio-economic conditions of the local community, especially those living and living around the Kayan Mentarang National Park, referring to the opinions above, are as follows: (1) conducting training related to the environment, including knowledge related to protected animals; (2) conducting training for forest guides to become more reliable, professional, and competent guides by combining local and modern safety techniques; (3) providing foreign language courses, which are indispensable to explain the local language or traditions and customs around Tana' Ulen; (4) opening workshops of traditions such as local art, dance, and music, to introduce local culture to the younger generation; and (5) community economic empowerment training especially for indigenous women, such as making handicrafts typical of Tana' Ulen.

Based on the discussion, the following proposition can be formulated: if the impact of local wisdom practices in managing Tana' Ulen can be properly addressed, then the socio-economic conditions of the local community can be elevated and the culture can be preserved to ensure sustainable forest management.

CONCLUSION AND RECOMMENDATIONS

Local wisdom practices of the Dayak Kenyah indigenous people in the management of Tana' Ulen in the Kayan Mentarang National Park include customary rules and activities related to the utilization of forest products. To the present, the customary rules in Tana' Ulen are well maintained. As an example, the community is prohibited from cutting down trees, opening fields, burning fields, and other activities that could damage the forests. On certain occasions, people are allowed to take the forest products, such as in the celebration of harvest, wedding, childbirth, or other special events in the village. The indigenous people also protect their forests from outsiders by mounting *parang* or *Mandau*, as SIP signs, on trees as a reminder that the area is protected.

The impact of the local wisdom practices of the Dayak Kenyah indigenous people in the management of Tana' Ulen in the Kayan Mentarang National Park on forest destruction can be identified as follows. (a) There is a zoning system in forest management based on local wisdom. The zoning system aims to limit the exploitation of forests that massive deforestation can be avoided. Besides that, the local wisdom has also strengthened the role of the forest in fulfilling the water needs for rice fields and the needs of wood for construction materials to build settlements. (b) Tana Ulen can function as a barn for the village in which the potential of the forest can provide a sense of security and guarantee for the survival of the community both economically and socially. Thus, the forest is managed wisely to improve the economy of the community by taking forest products sustainably under strict regulations of customary law and the practice of local wisdom.

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**THE IMPACT OF THE ECONOMIC ACTIVITIES OF MARINE TOURISM
IN JANGKA BEACH, JANGKA MESJID VILLAGE OF JANGKA BIREUEN SUBDISTRICT,
INDONESIA**

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ABSTRACT

Jangka Coast Area, Gampong Jangka Masjid, Jangka Subdistrict is one of the tourist destinations in Bireuen Regency which has the potential to be developed. Jangka Beach is a beach that has been developing for 4 years. Although it is still relatively new, this beach has been able to bring in a large number of tourists compared to other tourist attractions in Bireuen Regency, with a total of 500 - 2,000,000 in 2018. This study analyzed the impact of tourism activities on the economy of the community around the Jangka Beach, Bireuen Regency; specifically the impact on income generation and employment generation. In estimating the economic impact of tourism in the Jangka Beach Area, this study used a formula from the Keynesian Multiplier to calculate the Income Multiplier and the formula from Vanhove to calculate the Employment Multiplier. After the data is entered into both formulas, it will be known the amount of income multiplier and employment multiplier. The results of the study revealed that the total expenditure of tourists who came to the Jangka Coast was Rp. 12,095,000. Whereas through the analysis conducted, the Keynesian income multiplier value was 2.59; the income multiplier type I ratio was 1.09; and the income multiplier type II ratio was 1.14. Meanwhile, the employment multiplier, the multiplier value was 0.0000049; which means that this tourist attraction was only able to provide employment opportunities of 0.49 percent of new workers in the tourism sector in addition to the existing workforce.

KEY WORDS

Economic Impact, tourism, income multiplier, employment multiplier.

Marine tourism is one type of tourism that develops in Indonesia. This is because Indonesia is an archipelago with a long coastline and consists of thousands of large and small islands that have tourism potential (Bengen, 2002). This tourism potential really needs to be realized and developed because the tourism sector will provide a significant income for the region (Ismayanti, 2010).

Rapat Koordinasi Nasional Pariwisata III (3rd National Coordination Meeting of Tourism) of 2018 on "Accelerate Investment and Financing for Tourism Sector" stated that tourism has a large investment opportunity and is an option in stabilizing the deficit in Indonesia's trade balance. Tourism is designated as a mainstay sector in generating foreign exchange and a source of income for the region. The government has targeted in 2019 to reach the foreign exchange target of US \$ 20 billion, with a target of 20 million foreign tourists and the movement of 275 million local tourists.

Law No.10 of 2009 concerning Tourism states that one of the objectives of tourism is to increase economic growth. With the existence of tourism activities, the people who are in the tourism area will certainly be involved, which will lead to changes in the lives of the community itself, including the economy. This change is a result of the development of tourism to changes in employment and community income, patterns of labor division of, employment and business opportunities (Soekadijo, 2000).

Tourism is a complex social phenomenon and concerns the whole person and has various aspects such as sociological, psychological, economic, ecological, and others. The aspect that draws the most attention and is almost the only aspect that is considered

important is the economic aspect. On a small scale, tourism development will have a positive impact on the economy of a region (Soekadijo, 2000).

Gampong (village level administration) Jangka Mesjid, Jangka Subdistrict, Bireuen regency has developed a marine tourism objects since 2014. In the initial observation of this study, *Keuchik* (village head) Gampong Jangka Mesjid explained that at first this beach was not opened for tourism activities because people was worried that there would be violations of Islamic law and customs. But, since this tourist attraction was opened for the public around 2014, this place has been visited by many tourists and provides many benefits to the local community and its surroundings; because currently dozens of family heads make a living by becoming merchants on the Panjang Beach which also accommodates several surrounding local village youth as employees of the canteen, parking attendants and maintaining the security and cleanliness of the beach.

If viewed from the interest of tourist visits, the Gampong Jangka Mesjid maritime tourism activity which has been running for approximately 4 years has the potential to be developed and is believed to be able to improve the economy of the local community. In connection with that matter, it is necessary to conduct a scientific assessment of the *Multipier Effect* of Marine Tourism objects on the economy of the community in the Gampong Jangka Mesjid in the Jangka Subdistrict of Bireuen Regency.

METHODS OF RESEARCH

This research was conducted at a marine tourism objects in the Gampong Jangka Mesjid in the Jangka Subdistrict of Bireuen Regency, which is astronomically located at 5 ° 15'20.7 "N 96 ° 46'49.5" E (Figure 3.1). This research was carried out no later than 3 (three) months, started from October to December 2018.

In this study, the population was domestic tourists who visited the Jangka Beach in Bireuen Regency. Based on interviews with the Keuchik Gampong Jangka Mesjid, the number of visitor could reach 1.500 domestic tourists and local people each day. In this study, the community was only limited to business actors who opened their businesses on Jangka Beach; amounting to 30 businesses consisting of kiosk owners, 1 parking management unit and 3 public toilet units. In addition, 65 people worked in the business unit, consisting of 60 workers in the kiosk business unit, 3 people in the parking management unit and 2 people in public toilets.

The sampling of tourist in this study used a *Non-probability sampling*. In this technique, samples were taken by not giving the same opportunity for each member to be chosen as a sample and were determined by the researcher's need to answer the research question. The researcher used *Accidental sampling*, where anyone who to meet with the researcher and the person is considered suitable as a data source (Sugiyono, 2010). Based on the number of tourists (1.500 each day) with 5% level of errors, therefore there were 283 samples that could be taken; based on the number of business actors (32 business actors) with 5% level of errors, therefore there were 28 samples that could be taken; based on the number of workers (65 workers) with 5% level of errors, therefore there were 55 samples that could be taken. Based on the description above, the sample in this study can be classified as follows:

Table 1 – Sample Classification According to Isaac and Michael's Table

No.	Population	Total Population (N)	JumlaTotal Samples (Level of error 5%)
1.	Tourists	1.500	283
2.	Business actors	32	28
3.	Workers	65	55
	Total	1.597	366

Source: Processed Data from Researchers.

In calculating the average expenditure of tourists on the Jangka Beach in Bireuen Regency., the *Average Total Cost (ATC)* formula was used as follows:

$$\text{Average of Total Cost (Average Expenditure)} = \frac{\text{Total Cost (Tourists' Total Expenditure)}}{\text{Quantity (Number of Samples)}}$$

The economic impact in this study used *Multiplier Effects* analysis of the cashflow that occurs. The multiplier value of tourist expenditure could be calculated using the following formula. The multiplier value of tourist expenditure could be calculated using the following formula (META, 2001):

- The *Keynesian Income Multiplier*; the value created by the addition or reduction of expenses that are multiplied to determine whether there is an addition or reduction for local income. To reflect on the overall impact of additional expenditure, *Keynesian* is the best method;
- *Income Multiplier Ratio*; the value obtained from the addition and reduction of direct income from the local economy which has been multiplied to obtain the result of an increase or decrease in total local income.

Keynesian Income Multiplier and Ratio Income multiplier can be projected with the following formula:

$$\text{Keynesian Income Multiplier} = \frac{D + N + U}{E}$$

$$\text{Ratio Income Multiplier Tipe I} = \frac{D + N}{D}$$

$$\text{Ratio Income Multiplier Tipe II} = \frac{D + N + U}{D}$$

Where: D = Local income obtained directly from E; N = Local income obtained indirectly from E; U = Revenues earned that are induced from E; E = Visitor expenditure.

The value of *Keynesian Local Income Multiplier, Type I Ratio Income Multiplier, Type II Ratio Income Multiplier* have the following criteria:

- If these values are less than or equal to zero (≤ 0), then the tourist location has not been able to provide an economic impact on tourism activities;
- If the values are between zero and one ($0 < x < 1$), then the tourist location still has a low economic impact value;
- If these values are greater than or equal to one (≥ 1), then the tourist location has been able to provide an economic impact on tourism activities.

In analyzing the creation of employment opportunities, the Vanhove (2005) *multiplier analysis* would be used with the following formula:

$$Ek = \frac{\text{Direct} + \text{Indirect Employment}}{\text{Expenditure/spending}}$$

Where: Ek - Employment Multiplier; Direct - Direct employment generated by the tourism sector; Indirect - Indirect employment generated by the tourism sector; Expenditure - Total money spent by tourists.

The results of the calculation above would show the percentage of employment opportunities for new workers in the tourism sector.

RESULTS AND DISCUSSION

Direct Income Generation is a tourist expenditure that is carried out when buying goods and services in inns, restaurants, shops, other tourist facilities that produce tourist goods or merchandises to be exported or invested in tourism (Mathieson & Wall, 1982). Tourists' expenses during their time in tourist locations to meet their needs such as goods or services were impacted on the income of local people who worked at Jangka Beach.

Tourist expenses that affect the income of the community can be classified into four categories: entrance ticket, food or drink consumption, rental of game equipment and others such as expenses when using the toilet. The expenditure proportion of beach visitors can be seen in Table 2 below:

Table 2 – The Proportion of Tourist Expenditures on Jangka Beach

No	Categories	Total Expenditure (Per Visit)	Percentage (%)
1	Entrance / Parking Ticket	926.000	7.7
2	Consumption	11.087.000	91.7
3	Equipment Rental / Games	-	0
4	Others	82.000	0.7
Total		12.095.000	100

Source: Processed Data from Researchers.

In Table 2, it can be seen that tourist expenditure on the Jangka Beach showed considerable cash circulation, especially on holidays and weekends. Based on the data table above, it showed the total tourist expenditure obtained from the results of questionnaires to 283 tourist respondents as much as Rp. 12,095,000.

The largest percentage of tourist expenditure is for consumption purposes as much as 91.7%, while the lowest percentage of tourist expenditure is for rental equipment for game equipment that is equal to 0%. This is due to the fact that the majority of tourists visited the beach were more just to enjoy the beach atmosphere than to enjoy games such as Banana Boat and others.

To obtain the average tourist expenditure, $ATC = TC / Q$ calculation is used. The formula used as follows:

$$\text{Average of Total Cost (Average Expenditure)} = \frac{\text{Total Cost (Tourists' Total Expenditure)}}{\text{Quantity (Number of Samples)}}$$

The calculation results showed that the average tourist expenditure per visit was Rp. 42.739,- or rounded up to Rp. 43.000,- per visit.

The number of tourist visits greatly determined the sustainability of a tourist attraction especially in economic activity. The increasing number of tourist visits will certainly increase economic activity triggered by tourist expenditure. Therefore, the transaction flow is even higher. For business owners, revenue from the business unit will be reused to run the business unit as well as for the purchase of raw materials in the vicinity of the Jangka Beach (local).

There are not so many types of businesses on Jangka Beach. The results of the study found out that there are only three types of businesses makes money: kiosks, parking / ticket services and toilets. The details of the income of business owners from tourism on the Jangka Beach can be seen in Table 3 below:

Table 3 – The Revenue of Business Owner on Jangka Beach

No	Business Unit or Service	Revenue per Month (Rp)
1	Kiosk	672.000.000
2	Parking Service	39.000.000
3	Toilet	2.000.000
Total		713.000.000

Source: Processed Data from Researchers.

Indirect Income Generation is expenditure caused by the payment of salaries or wages to local employees or tourist companies to fill their shares. Indirect economic impacts can be seen from the proportion of employee wages & the purchase of raw materials on the income of business owners (Archer, 1976). The details can be seen in Table 4 below:

Table 4 – Proportion of Business Units

No	Components	Proportion on total revenue (%)	Annotation
1	Revenue	42.32	Local
2	Employee Wages	10.00	Local
3	Expenditure needs	47.68	Local
	Total	100	

Source: Processed Data from Researchers.

In Table 4, it can be seen that the proportion for business income was 42.32% of the operating results used for employee wages and expenditure needs. The next proportion of 10.00% of income is used by business owner for labor. The highest proportion is on expenditure for raw materials; because according to business owner, raw materials often needs to be stocked in large quantities to avoid erratic price increases and also the items purchased are goods that do not expire quickly. Therefore, the intensity of purchasing is high, while for labor the proportion is low because in some kiosks only employ workers at certain times.

Indirect economic impacts on the Jangka Beach is also seen from the salary received by workers, which then from labor income will be used to buy daily needs and be used for other purposes. The following table is the average labor income in the Jangka Beach based on the questionnaire.

Table 5 – The Income of Local Labor

No	Business Unit	Number of Questionnaires	Labor Income per Month (Rp)
1	Kiosk	51	64.350.000
2	Parking / Ticketing	3	3.900.000
3	Toilet	1	200.000
	Total	55	68.450.000

Source: Processed Data from Researchers.

Data in Table 5 showed that there is diversity in the amount of labor income; that diversity depends on the type of work carried out by the community on the Jangka Beach. The total labor incomes were based on the questionnaire that was distributed to 55 respondents at the Jangka Beach, Rp. 68,450,000.

The more tourists visiting the Jangka Beach, the faster the money turnover and the more business opportunities opened for the people on the Jangka Beach. With the opening of business opportunities, it will certainly have a significant impact on the society's economic changes.

Induced Income Generation is an increase in consumer expenditure resulted from additional personal income generated from direct expenditure (Mathieson & Wall, 1982). In this case, the formation of advanced income is obtained based on expenditures incurred by Jangka Beach's local workers. The types of expenditures incurred by local labor i.e. used for daily needs such as daily consumptions, communication, transportation, social activities and savings. The clearer information about average labor expenditure can be seen in Table 6 below:

Table 6 – Proportion of Labor Expenditures

No	Expenditures	Total Amount (Rp)	Percentage (%)
1	Daily Consumptions	34,957,500	51
2	Communication	8,240,000	12
3	Transportation	5,460,000	8
4	Social Activities	2,730,000	4
5	Savings	17,062,500	25
	Total	64.350.000	100

Source: Processed Data from Researchers.

It can be seen from Table 6 that the highest expenditure of local labor was for daily consumption as much as 51%; and the lowest expenditure was for social activities only 4%. From all 51 samples there is no expenditure on household needs or education costs, because the average workforce is young and has no family (single), and for those who are married they usually still rely on the income of husbands who work outside the Jangka Beach to increase their income.

Income Multiplier Value from tourist expenditure that occurs in the Jangka Beach area can be measured using *multiplier effects* from the cash flow. The following formulas were used to calculate the *Multiplier Effect* of Jangka Beach tourism activities.

There are two multiplier values based on META (2001) in measuring Income Multiplier, namely:

- *Keynesian Income Multiplier* that shows how tourist expenditure has an impact on increasing local people's income. *The Keynesian Income Multiplier (KIM)*, calculated using the formula:

$$\text{Keynesian Income Multiplier} = \frac{D + N + U}{E}$$

Where: D = total income of business owner; N = total income of workers; U= total expenditure of labor's daily consumption; E = total expenditure of tourist; If the value is entered, the result showed as follows:

$$KIM = \frac{713.000.000 + 68.250.000 + 34.855.500}{314.470.000} = 2.59$$

This means that every time a Rp. 1 increases in tourist expenditure, it will have a direct impact of Rp. 2.59, - rupiah on the economy of the community.

- *Ratio of Income Multiplier (RIM)*, which shows how much direct impact, was felt from tourist expenditure which has a direct impact on the overall local economy. For more details, the analysis of the *Income Multiplier* can be seen below:

$$RIM \text{ Type I} = \frac{D + N}{D} = 1.09$$

This means that every Rp. 1 increases of business unit income will result in an increase of Rp. 1.09 rupiah on the income of the surrounding workers (in the form of business owner income and labor wages).

$$RIM \text{ Type II} = \frac{D + N + U}{D} = 1.14$$

This means that every Rp. 1 increases in the reception of a business unit, it will result in an increase of Rp. 1.14 in the income of the owner of the business unit, labor income, and labor consumption expenditure at the local level.

For more details, the value of the *Multiplier Effect* can be seen in Table 7 below:

Table 7 – Multiplier Effect Value

No	Criteria	Value
1	<i>Keynesian Income Multiplier</i>	2.59
2	<i>Income Multiplier Ratio Type I</i>	1.09
3	<i>Income Multiplier Ratio Type II</i>	1.14

Source: Processed Data from Researchers.

To determine whether tourism activities on the Jangka Beach have an impact on the economy, the three types of values obtained need to be matched with the criteria as explained by *Marine Ecotourism for Atlantic Area* (2001). If the value is between zero and

one ($0 < x < 1$), the tourist area has an impact on the economy even though it's low. If the value is greater than or equal to one (≥ 1), the tourist area has contributed to the economy in the form of tourism activities.

Based on the results in Table 7, the obtained value of the three *Multiplier Effect* criteria is greater than one (> 1), therefore it can be concluded that the existence of the Jangka Beach Marine Tourism has actually had an economic impact on the economy of the community, which includes direct impacts, indirect impact and further impact (in the form of income of the owner of the business unit, local labor income and income for local level consumption).

To analyze the formation of employment, *multiplier analysis* will be used (Vanhove, 2005) with the following formula:

$$Ek = \frac{\text{Direct} + \text{Indirect Employment}}{\text{Expenditure/spending}}$$

Where: Ek - Employment Multiplier; Direct - Direct employment generated by the tourism sector; Indirect - Indirect employment generated by the tourism sector; Expenditure - Total money spent by tourists.

The formula will be used to observe the results of the sum of the number of employees who work with the expenditure of tourists on the Jangka Beach.

Table 8 – Number of employees worked on the Jangka Beach

No	Division	Employees
<i>Direct Employment</i>		
1	Ticketing/Parking	3 personnel
2	Kiosk	51 personnel
3	Toilet	1 personnel
Total		55 personnel
<i>Indirect Employment</i>		
1	Janitorial Service	2 personnel
2	Security	2 personnel
Total		4 personnel

Source: Processed Data from Researchers.

Based on the table above, it can be seen that there were 55 employees who interact directly with tourists; and 4 employees who did not interact directly with tourists. Whereas for data on total tourist expenditure as much as Rp 12,095,000-. This expenditure is obtained during tourists spent their time on the Jangka Beach.

If the value is entered, the result is as follows:

$$Ek = \frac{\text{Direct} + \text{Indirect Employment}}{\text{Expenditure/spending}} = 0.0000049$$

The results of the analysis can be concluded that:

- If every tourist spends Rp. 1, it can give the effect of a job opportunity as much as 0.0000049 percent of the workers in the Jangka Beach marine tourism object;
- If the tourists who visit the Jangka Beach marine tourism object and spent Rp 100.000 per visit, it can provide employment opportunities of 0.49 percent of new workers in the field of tourism; means that there are still very few opportunities to open employment opportunities for new workers in tourism in addition to existing workers.

CONCLUSION AND RECOMMENDATIONS

The Marine Tourism Activities of Jangka Beach in Bireuen Regency have had a large economic impact on local communities. The economic impacts of tourism activities were direct impacts, indirect impacts, and further impacts measured by the value of *multiplier effects*, where from the results of this study the *income multiplier effect* value is greater than one (> 1), i.e. 2.59 for the *Keynesian Income Multiplier*, 1.09 for the *Income Multiplier Ratio Type I*; and 1.14 for the *Income Multiplier Ratio for Type II*.

The percentage of employment opportunities for new workers of Jangka Beach Marine Tourism activity in Bireuen Regency was still very small, this was indicated by the *multiplier effect*, where from the results of this study, the *Employment Multiplier* value was 0.0000049, means that it only gives employment opportunities of 0.49 percent of the new workers in tourism in addition to the existing workforce.

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IMPACT OF PRESIDENTIAL ELECTION ON INDONESIAN CAPITAL MARKET: AN EVENT STUDY ANALYSIS

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ABSTRACT

Political events such as Indonesia presidential election in 2014, US presidential election in 2016, and Indonesia presidential election in 2019 are predicted to have effect on the performance of Indonesian capital market. It will have big impact on the dynamics of the stock market price index which become very volatile because investors will respond to that event. The purpose of this study is to analyze the differences of abnormal returns that found on Indonesia Composite Index in 5 days and 10 days event window between before and after the events. The event study methodology is used to evaluate the impact of presidential election to Indonesian capital market. This study also evaluated the significance effect of every events using paired sample test. The result of this study gives an alternative option for investors to make decision at the time of a similar event in the future.

KEY WORDS

Abnormal return, event study, Indonesia Composite Index, presidential election.

Market performance in the Indonesia Stock Exchange is influenced by various types of events that occur, including economic factors, political factors, stability and security factors, and the company's performance itself (Simatupang, 2010). Events that occur are important to analyze because at that time the country's economy became unstable. The movement of stock prices becomes very volatile because every investor will respond to the event especially at the moment of presidential election in every period. The events of presidential election have been analyzed to be able to find the right time for investors to get the maximum profit from positive abnormal returns and avoid losses from negative abnormal returns. Before the occurrence of the event, it has also been analyzed using an estimation window for 100 days because at this time issues about the events that will occur have been spread, so that investors can react faster. The reaction of investors before the occurrence of an event causes the stock index to fluctuate earlier before events actually occur. As a result, the market becomes a strong form and in this market form it is not possible to find abnormal returns.

LITERATURE REVIEW

The research related to event study from the influence of an event on stock prices was examined by Hartawan et al. (2015) who analyzed the differences in average trading volume activity and abnormal returns between before and after the legislative elections on 9 April 2014. This study used an event study method using an event window for 11 days consisting of 5 days before election events, days election events, and 5 days after the legislative election events. In addition, this study uses data on daily stock trading volume, number of shares outstanding, daily closing stock prices, and Indonesia Composite Index value and uses the market adjusted model. The results showed that based on statistical tests of average trade volume and average stock abnormal returns during the event period, it was

found that there was no difference in average trading volume and a significant average abnormal return between before and after legislative election events.

Akben Elif (2015) reviewed the effect of announcements of Turkish company mergers and acquisitions on the company's stock price for the period 2000-2014, then found 67 announcements of mergers and acquisitions during that period. The method used is event study by using the event window for 21 days. The results of this research are the finding of positive significant abnormal returns in companies that make mergers and acquisitions of 5.25 to 8.53 percent. I., Antoniadis (2014) examined the effect of mergers and acquisitions of 3 major Greek banks in July 2010 on the share price of the banking sector. The method used is the event study method with the results of finding significant abnormal returns from the 2 banks, while 1 more bank is not affected by the mergers and acquisitions made because there are no significant abnormal returns found.

Ali et al. (2011) examined the political events that occurred with the Lahore Stock Exchange (LSE) index in Pakistan by selecting 15 random political events that occurred between 2003 and 2009. The results found were only a few political events that had an influence on the temporary LSE index other political events have no influence. Bilada A (2011) examines the influence of 25 extreme events consisting of political, social, and economic events on stock price sectoral indices and joint stock price indices using the event study method, market model (OLS) for expected return calculations, and t-test for see abnormal returns between before and after extreme events occur. The results obtained are that there are several events that affect the price of these stock indices, while other events have no effect.

Floros (2008) examined the effect of parliamentary election events on the Athens Stock Exchange (ASE) in Greece in the 1996-2002 using the event study method. The results showed that 3 months before the occurrence of parliamentary elections, the ASE price index increased. Meanwhile, the ASE price index declined 3 months after the events of parliamentary elections. Manurung and Cahyanti (2007) reviewed the 2004 political elections on various industrial sectors on the Jakarta Stock Exchange (JSE) using the event study method and obtained results in the form of significant negative abnormal returns in several sectors. Statistically, the average abnormal return between before and after the election did not experience a significant difference. A similar study was also conducted by Rizal (2005) who reviewed the capital market reaction to the 2004 elections by using the event study method, but using the LQ45 index with the results that there were no significant abnormal returns between before and after the 2004 election against the LQ45 index.

Asmita (2005) also examined the same thing, namely the reaction of the capital market to the 2004 elections which was assessed by abnormal returns and trading volume. The results obtained were that there were abnormal returns in the 2004 election period, but based on testing the average abnormal return and the average stock trading volume between before and after the election did not show significant results. Meidawati and Harimawan (2004) examined the effect of legislative election events in Indonesia on stock returns on the LQ45 index by using the event study method as an analytical tool. The event window used was for 10 days before and 10 days after the legislative election event and the results were that the 2004 legislative elections had an influence on the volume of stock trading, but did not significantly affect the abnormal return on the stock. So that it can be said that investors cannot obtain maximum profits in that period because of the small value of abnormal returns.

METHODS OF RESEARCH

This research was carried out by means of a quantitative approach on the Indonesia Stock Exchange using the event study method. In addition, testing of the significance of abnormal returns is done by using statistical paired sample test. This study used secondary data of Indonesia Composite Index daily price and exchange rate of Rupiah against USD. This daily data is obtained from the website www.finance.yahoo.com, www.idx.co.id, and www.go.bi.id.

The framework was built to analyze the influence of political event especially the US presidential election in 2016 on the Indonesia Composite Index using the event study method (Figure 1). According to Bodie et al. (2014) event study is a financial research technique to study the impact of a particular event on the dynamics of abnormal returns. MacKinlay (1997) assures that daily analysis will yield better results than monthly analysis.

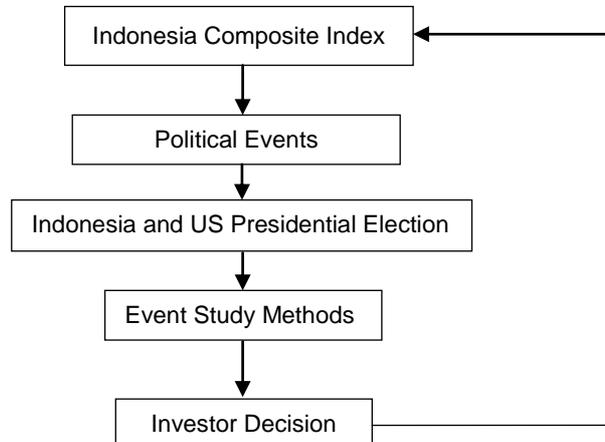


Figure 1 – Research Framework

Market dynamics are analyzed based on abnormal returns at each event. This study uses two types of event window. First, an event window for 11 days, consisting of 5 days before the event, 1 day when the event occurred, and 5 days after the event. Second, an event window for 21 days, consisting of 10 days before the event, 1 day when the event occurred, and 10 days after the event. Expected returns on Indonesia Composite Index (ICI) in this study are calculated using mean adjusted model for 100 days estimation window. In addition, a paired sample test is performed on the average abnormal return value between before and after the event. The results of this study are expected to be information and references for investors in making decisions to invest in the right time.

The calculation of abnormal return is central to this methodology. Abnormal returns are calculated, as the difference of the actual returns minus the expected returns. The actual returns of stock i at t time is calculated using the following relationship:

$$R_{it} = \frac{P_{it} - P_{i(t-1)}}{P_{i(t-1)}} \quad (1)$$

Where: R_i is the actual returns of the stock and P_i is the closing price of the stock price at t time. After calculating the actual returns, the expected returns on Indonesia Composite Index use mean adjusted model for 100 days estimation window:

$$E(R_i) = \frac{\sum_{j=1}^T R_{ij}}{T} \quad (2)$$

Where: $E(R_i)$ is the expected returns of the stock, R_{ij} is the actual returns of stock i at j time. T is 100 days of estimation window. The following step is to calculate abnormal returns as the difference between expected returns and actual returns of the stock i at t time using equation:

$$AR_{it} = R_{it} - E(R_i) \quad (3)$$

Where: AR_{it} is the abnormal returns of the stock. Abnormal returns show the change in the price of the stock caused by the US presidential election. Cumulative abnormal return (CAR) is also calculated to count the total ARs in the event window using equation:

$$CAR_{it} = \sum_{t-5}^{t+5} AR_{it} \quad (4)$$

Where: CAR_{it} is the cumulative abnormal return of the stock for time t . The calculation for average abnormal return (AAR) is performed using the following equation:

$$AAR_{it} = \frac{1}{t} \sum_{i=1}^t AR_{it} \quad (5)$$

Where: AAR_{it} is the average abnormal return of the stock for time t . The AAR is used to test the significance between before and after the event. The first step is calculating standard deviation using the following equation:

$$S_i = \sqrt{\frac{\sum_{t=1}^n (AR_{it} - AAR)^2}{n-1}} \quad (6)$$

Where: S_i is the standard deviation and n is total day in event window. The second step is calculating T_{count} to compare with T_{table} if the AAR between before and after the event is significant or not using the following equation.

$$T_{count} = \frac{AAR_{after} - AAR_{before}}{\sqrt{\left(\frac{S_{after}}{n_1}\right) + \left(\frac{S_{before}}{n_2}\right)}} \quad (7)$$

Where: T_{count} is the value that is used to compare with T_{table} . S_{after} and S_{before} are the standard deviation between before and after the event. n_1 and n_2 are the time periods between before and after the event. If T_{count} is bigger than T_{table} , then the hypothesis 1 is accepted.

Hypothesizes of this study are:

- Hypothesis 1: There is a significant difference in average abnormal return, before and after the event;
- Hypothesis 2: There is a difference at the result of different event window on the same event.

RESULTS OF STUDY

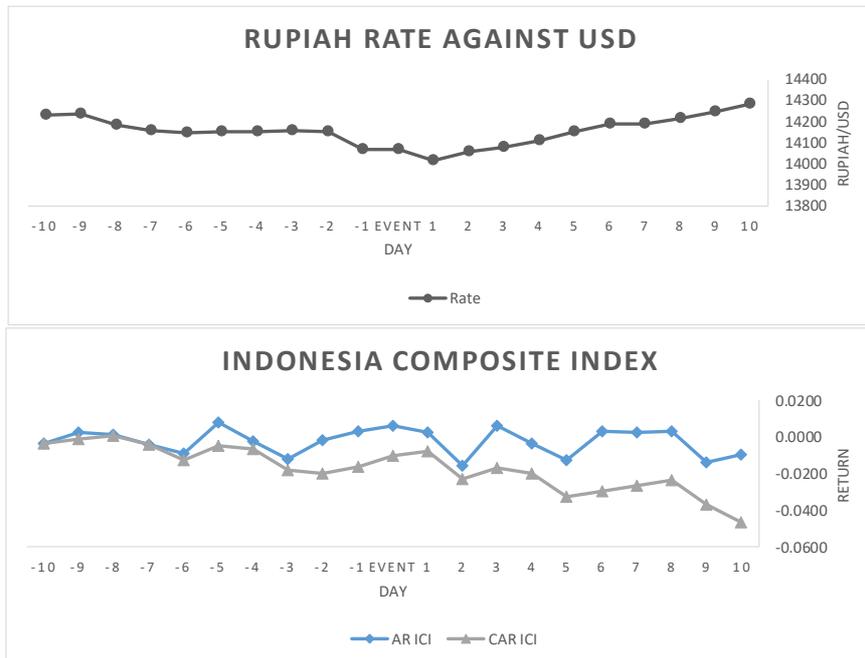
There are seven events of Indonesia presidential election but all of them did not have significance effect to the Indonesia Composite Index (ICI). This is one of the complete analyses which are Indonesia presidential election in 2019 event and the other events is not shown in this journal. The Indonesian presidential election was held on 17th April 2019 to determine who would be the president and vice president between the Joko Widodo-Ma'ruf Amin and Prabowo Subianto-Sandiaga Uno. During the event window, the ICI became very volatile because the 2019 Indonesian presidential election was safe and peaceful but there was intense competition between the two candidates since the previous presidential debate. Both are equally strong and have equal opportunities to become Indonesia's president for the 2019-2024 period. The quick count results after the election stated that the winner of the 2019 Indonesian presidential election was Joko Widodo, but Prabowo Subianto gave a statement that he was the winner.

This uncertainty causes economic instability so it would be better to wait for the official announcement from official organization, but until that time the Indonesian market will certainly fluctuate. At the time of the event, positive abnormal returns were found on the Indonesia Composite Index, so it could be said that the Indonesian presidential election in 2019 were positively responded by the Indonesian capital market. Abnormal return that were found in different event window was not much different, it was around 0.0003 point. Besides, rupiah rate against USD also fluctuate around the event but not much different from H-10 before the event to H+10 after the event (Table 1).

Table 1 – Rupiah Exchange Rate against USD and Returns of Indonesia Composite Index at the Indonesian Presidential Election Event Window in 2019

Day	(-5,+5) Days		(-10,+10) Days		Rate
	AR ICI	CAR ICI	AR ICI	CAR ICI	
H+10	-	-	-0.0098	-0.0467	14282
H+9	-	-	-0.0137	-0.0369	14245
H+8	-	-	0.0034	-0.0232	14215
H+7	-	-	0.0027	-0.0267	14188
H+6	-	-	0.0033	-0.0294	14188
H+5	-0.0125	-0.0171	-0.0128	-0.0327	14154
H+4	-0.0031	-0.0047	-0.0034	-0.0199	14112
H+3	0.0067	-0.0015	0.0064	-0.0165	14080
H+2	-0.0151	-0.0082	-0.0153	-0.0229	14056
H+1	0.0031	0.0069	0.0028	-0.0075	14016
Event	0.0064	0.0038	0.0061	-0.0103	14066
H-1	0.0037	-0.0026	0.0034	-0.0164	14067
H-2	-0.0015	-0.0064	-0.0018	-0.0198	14153
H-3	-0.0114	-0.0048	-0.0117	-0.0180	14156
H-4	-0.0018	0.0065	-0.0021	-0.0064	14155
H-5	0.0083	0.0083	0.0080	-0.0043	14150
H-6	-	-	-0.0086	-0.0123	14145
H-7	-	-	-0.0043	-0.0037	14158
H-8	-	-	0.0017	0.0006	14182
H-9	-	-	0.0025	-0.0011	14237
H-10	-	-	-0.0036	-0.0036	14231

Source: Yahoo Finance and Bank Indonesia, reprocessed



Source: Yahoo Finance and Bank Indonesia, reprocessed

Figure 2 – Movement of Rupiah Rate against USD and Return of Indonesia Composite Index at the Indonesian Presidential Election Event Window in 2019

The results of paired sample test on average abnormal return of 5 days and 10 days between before and after the event of the Indonesian presidential election in 2019 was not have a significance effect. This is evidenced by the ICI p-value of 5 days event window is 0.613 and higher than alpha at 0.05. The ICI p-value of 10 days event window is 0.626 and higher than alpha at 0.05 (Table 2). It can be said that the abnormal return during the event

window is still in the normal level, so investors cannot get a significant return on this event. According to the theory of the efficient market hypothesis, in this condition the market has been in semi-strong form because abnormal returns is found but was not significant.

The seven events of Indonesian presidential election are presidential nomination day, the presidential Election Day, the announcement of the Election Day, and the inauguration day of the president. On 31th May 2014, two candidates for Indonesia presidential election candidates were officially nominated, namely Prabowo Subianto-Hatta Rajasa and Joko Widodo-Muhammad Jusuf Kalla. The Indonesia presidential election was held on 9th July 2014. Then, on 22th July 2014 the winner of Indonesia presidential election was announced as Joko Widodo-Muhammad Jusuf Kalla with a percentage of 53.15% defeating Prabowo Subianto-Hatta Rajasa with a percentage of 46.85%. The inauguration of President Joko Widodo and Vice-president Muhammad Jusuf Kalla was held on 20th October 2014. On 20th September 2018, two presidential nominations were officially nominated, namely Joko Widodo-Ma'ruf Amin and Prabowo Subianto-Sandiaga Uno. The Indonesian presidential election was held on 17th April 2019 and the Indonesian presidential election winner was announced officially on 21st May 2019. Impact of the Indonesian presidential election has been analyzed as seven events according to the date of the event. The result shows that all of seven events did not have significance effect on Indonesian capital market because all T_{count} that have been calculated are below the T_{table} at 2.776 for 5 days event window, below the T_{table} at 2.262 for 10 days event window, and all of the significance value both 5 days event window and 10 days event window was above alpha at 0.05 (Table 2).

Table 2 – Significance Test Result of Indonesia Presidential Election

No	Event	(-5,+5) Days		(-10,+10) Days	
		T_{count}	Sig. (2-tailed)	T_{count}	Sig. (2-tailed)
1	Indonesian presidential nomination 2014	-0.599	0.581	-0.235	0.819
2	Indonesian presidential election 2014	-0.219	0.837	-0.602	0.562
3	Indonesian presidential announcement 2014	-1.076	0.342	-1.119	0.292
4	Indonesian presidential inauguration 2014	-0.693	0.527	-0.244	0.813
5	Indonesian presidential nomination 2018	-0.511	0.637	-0.544	0.600
6	Indonesian presidential election 2019	-0.548	0.613	-0.505	0.626
7	Indonesian presidential announcement 2019	1.287	0.268	1.132	0.329

Source: Yahoo Finance, reprocessed

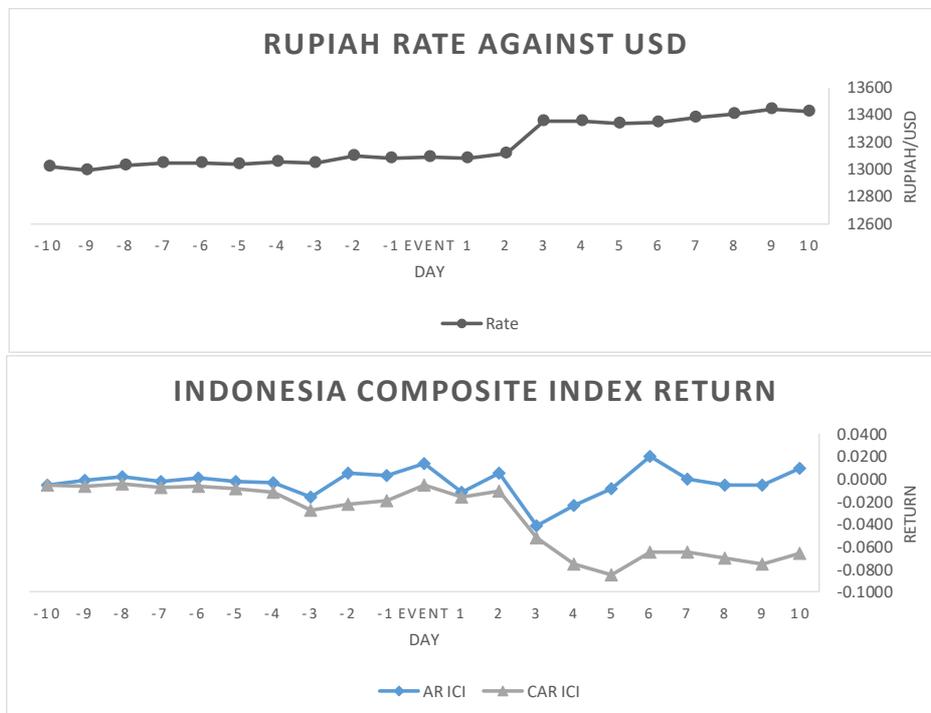
There are four events of US presidential election and one of them has significance effect to the Indonesian capital market, but not for the others. This is the complete analysis which has significance effect of US presidential election in 2019 event on Indonesian capital market and the other events is not shown in this journal. The election of Donald Trump as the winner of the US presidential election by doing an unusual campaign and reaping a lot of criticism has a negative impact on the Asian market especially Indonesia. Trade war was begun between US and China, also global economic is going down. This event has negative significance impact on Indonesian capital market and Rupiah exchange rate against USD. Abnormal return that was found in different event window was not much different, it was around 0.0001 point. Even at the time of the event, positive abnormal return is found on Indonesia Composite Index (ICI), rupiah exchange rate has decline trend from Rp 13.022,00 at H-10 before the event to Rp 13.424,00 at H+10 after the event (Table 3).

The whole world does not expect that Donald Trump will defeat Hillary Clinton in the US presidential election in 2016. Indonesian market did not quickly enough to respond the event and causing a significant negative return in 5 days event window on Indonesia Composite Index between before and after the event. The decline trend of Indonesia Composite Index prices after the event made Rupiah exchange rate against USD also decreasing (Figure 3).

Table 3 – Rupiah Exchange Rate against USD and Returns of Indonesia Composite Index at the US Presidential Election Event Window in 2016

Day	(-5,+5) Days		(-10,+10) Days		Rate
	AR ICI	CAR ICI	AR ICI	CAR ICI	
H+10	-	-	0.0097	-0.0659	13424
H+9	-	-	-0.0055	-0.0756	13438
H+8	-	-	-0.0057	-0.0701	13408
H+7	-	-	0.0002	-0.0644	13385
H+6	-	-	0.0198	-0.0646	13347
H+5	-0.0085	-0.0772	-0.0086	-0.0843	13338
H+4	-0.0234	-0.0687	-0.0235	-0.0758	13358
H+3	-0.0412	-0.0453	-0.0413	-0.0523	13350
H+2	0.0055	-0.0040	0.0054	-0.0109	13118
H+1	-0.0115	-0.0095	-0.0116	-0.0163	13084
Event	0.0145	0.0020	0.0144	-0.0047	13090
H-1	0.0032	-0.0125	0.0031	-0.0191	13082
H-2	0.0050	-0.0157	0.0049	-0.0222	13103
H-3	-0.0152	-0.0208	-0.0153	-0.0271	13050
H-4	-0.0031	-0.0055	-0.0032	-0.0118	13058
H-5	-0.0024	-0.0024	-0.0025	-0.0086	13036
H-6	-	-	0.0010	-0.0061	13051
H-7	-	-	-0.0025	-0.0071	13048
H-8	-	-	0.0019	-0.0046	13027
H-9	-	-	-0.0009	-0.0065	12997
H-10	-	-	-0.0056	-0.0056	13022

Source: Yahoo Finance and Bank Indonesia, reprocessed



Source: Yahoo Finance and Bank Indonesia, reprocessed

Figure 3 – Movement of Rupiah Rate against USD and Returns of Indonesia Composite Index at the US Presidential Election Event Window in 2016

The result of a different paired sample test of average abnormal return of Indonesia Composite Index between before and after the US presidential election in 2016 were had significant negative differences on 5 days event window, but had not significant negative differences on 10 days event window. This is evidenced by the ICI p-value of 5 days event window is 0.049 and lower than alpha at 0.05. Meanwhile, ICI p-value of 10 days event window is 0.377 and higher than alpha at 0.05 (Table 4). It can be said that the abnormal return during 5 days event window is already above normal level, so investors will get a significant return on this event. Unfortunately, this significance effect is a negative trend based on negative sign which is found on T_{count} , so the return on investment will be negative according to the decline trend.

The US presidential election began when Donald Trump was elected as a potential presidential candidate from the republic on 3rd May 2016 and Hillary Clinton was selected as a potential presidential candidate from the democratic on 6th June 2016. After that, the US presidential election was held on 8th November 2016 with results Donald Trump from the republic defeated Hillary Clinton from the democratic with 270 votes from all 538 votes. Then on 20th January 2017, Donald Trump was officially inaugurated as the 70th president of the United States. Impact of the US presidential election has been analyzed as four events according to the date of the event. The result shows that only one event of US presidential election has significance effect, other three events did not have significance effect on Indonesian capital market because all T_{count} that have been calculated are below the T_{table} at 2.776 for 5 days event window, below the T_{table} at 2.262 for 10 days event window, and all of the significance value both 5 days event window and 10 days event window was above alpha at 0.05 (Table 4).

Table 4 – Significance Test Result of US Presidential Election

No	Event	(-5,+5) Days		(-10,+10) Days	
		T_{count}	Sig. (2-tailed)	T_{count}	Sig. (2-tailed)
1	Donald Trump as president candidate 2016	0.555	0.609	-0.396	0.701
2	Hillary Clinton as president candidate 2016	-1.296	0.265	-1.337	0.214
3	US presidential election 2016	-2.794	0.049*	-0.929	0.377
4	US presidential inauguration 2017	1.836	0.140	1.774	0.112

* = denote significance at 5%

Source: Yahoo Finance, reprocessed

This condition is a moment that must be avoided by investors because they can experience significant losses from their investments in the Indonesia Composite Index near the event day. It is suggested to investors to sell their investment in Indonesia Composite Index before the event to reduce their loss. Meanwhile, the abnormal return of 10 days before and 10 days after the event is not significant, so investors cannot get a significant return, both positive or negative returns from Indonesian capital market on this event. According to the theory of the efficient market hypothesis, this condition the market is already efficient in the weak form of Indonesia Composite Index because of negative significant abnormal return is found on 5 days event window and a half-strong form on 10 days event window because of the abnormal return occurrence but not significant.

CONCLUSION

The result of the study is only one event from eleven events that has significance effect of the Indonesian capital market. This study shows the Indonesian capital market already fast enough to respond the occurrence of political events which is indicated by the existence of abnormal returns, both positive and negative returns depending on the investor's judgment of the events. If the market is fast enough, it is impossible to found abnormal return because the market already in the strong form according to efficient market

hypothesis. This study also shows that a longer event window tends to be stable and the significance effect is only happened in a short period because of an unexpected event.

The existence of a significant negative abnormal return between before and after the events of the US presidential election in 2016 shows at this time investors will experience substantial losses. The presence of a significant abnormal return in the event window shows that the market at that time was in a weak form because the market did not react quickly to events that occurred. The winner of the US election is also unexpected event because global market hopes Hillary Clinton win the US presidential election, but the fact is out of prediction. This event makes a significant negative trend of the Indonesia Composite Index on 5 days before and 5 days after the event, but did not have significance effect on 10 days before and 10 days after the event. If the US presidential election is going to be held in 2020, it is recommended to investors to invest in other safe stock market. Investors have to avoid to invest in Indonesia Composite Index at this moment and they have to allocate their investment to a stable stock index such as blue-chip index to avoid the risk of substantial losses.

This study has a limitation. The first limitation of this study is only using one model to calculate expected return. For further research, it is recommended to conduct analysis using different model to see whether the same event will provide the same significant level at different model. Second, the variable is used in this study is only daily stock price, so further research can add other variables such as trading volume activity.

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ANALYSIS OF SOCIO-ECONOMIC CONDITIONS OF SEAWEED FARMERS IN NEMBERALA VILLAGE, WEST ROTE DISTRICT, INDONESIA

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ABSTRACT

Seaweed was firstly cultivated in Nemberala Village in 1998 by Ibrahim Agustinus Meda who then ran as the regent of Kupang Regency. Since then, seaweed farmed has become a favourite job in Nemberala. This study aims to describe the socio-economic condition of seaweed farmers in Nemberala village. This study was conducted in Nemberala Village, West Rote District, East Nusa Tenggara by using a qualitative approach. Its result shows that the socio-economic status of seaweed farmer in Nemberala village is in the middle class. Seaweed farmer in Nemberala village has improved the level of education and community well-being as a result of the high income.

KEY WORDS

Social status, seaweed, seaweed farmer, education, occupational status, income.

Indonesia has the fourth-longest coastline in the world, which is around 95,181 KM spread by large and small islands. This coastline has the potential for the development of marine aquaculture. The potential for marine cultivation in Rote Ndao Regency is 112,210 Ha. One of the economic development activities promoted by the government for the marine potential is seaweed cultivation. This research was conducted in Rote Ndao District because it is one of the districts that have a seaweed cultivation program and has a vast sea area of 112,210 Ha, and is well known overseas as a place for marine tourism destinations that has the potential to be developed.

Rote Ndao Regency is located in westernmost Indonesia which is borders directly with the Australian Continent. This regency is classified as an underdeveloped area in Indonesia (listed in the Presidential Regulation Number 131 of 2015 about Determination of Disadvantaged Regions Year 2015-2019). One area known as the seaweed cultivation area in Rote Ndao Regency is Nemberla Village. This program is expected to stimulate regional economic growth due to the increase in local people's income. Since 1998, the community in Nemberala village started to work as a seaweed farmer. Ibrahim Agustinus Meda carried a bucket, rope, seaweed seeds, waring net (used for drying seaweed), as well as involving the community to participate in cultivating the seaweed. At first, it was difficult to convince community to start working as seaweed farmer, because that was the new thing for community in Rote. Prior to seaweed, the community's jobs were Palmyra taper, mat weaver with pandan leaves, and copra seller with excessively low income compared to selling seaweed. Until now seaweed has remained as the highest income job compared to other jobs and has become a popular job in the village of Nemberala. According to Central Bureau of Statistics (BPS) data in 2008, income is classified into 4 groups, namely: very high income group (> Rp3,500,000 per month), high income group (Rp2,500,000 – Rp3,500,000 per month), middle income group (Rp1,500,000 – Rp 2,500,000 per month), and low income group (< Rp1,500,000 per month).

There are three indicators which can describe the socio-economic condition of seaweed farmer which can also be used to measured class social, namely education, occupational status, and income (Nichol, Brown, dan Haynes, 2011). Education plays an

important role in determining person status in the society. Beside that, work is a very important part of our everyday lives, many individuals spend one-half or more of their waking hours in an occupational/work place. Moreover, the socioeconomic status we enjoy, and the accompanying quality of life, depends largely on our occupation. Therefore, work also influences our ability to earn income. Additionally, low income have been shown to be strong predictors of a range of physical and mental health problems. This problem may be due to environmental conditions in their household or workplace. While, community with high income can easily fulfill the family needs, they can even buy luxury goods which also influences their social status in society. According to Central Bureau of Statistics (BPS) data in 2008, income is classified into 4 groups, namely: very high income group (> Rp3,500,000 per month), high income group (Rp2,500,000 – Rp3,500,000 per month), middle income group (Rp1,500,000 – Rp 2,500,000 per month), and low income group (< Rp1,500,000 per month). This study aims to analyse the socioeconomic condition and status of seaweed farmer in Nemberala Village.

METHODS OF RESEARCH

The method used in this research is a study case from the seaweed farmers in Nemberala Village in 2019. Nemberala village is located in Rote Barat Sub-district, Rote Ndao Regency. This study is carried out by qualitative research method which aims to reveal the real condition in a holistic contextual (comprehensive and contextual) through collecting data from respondents. Data collection includes primary and secondary data. Primary data has done by interviewing the key person and observation the life of the seaweed farmers directly. The determination of respondents in this study uses the snow-ball method until informasi yang dibutuhkan dari informan lengkap dan jenuh. Interviews and observation conducted with local governments – village head, dan sub-district head, seaweed middleman/traders, and seaweed farmers. Secondary data was obtained from the village office, statistics central agency, and previous research reports. Data analysis techniques are data reduction, data verification, and data presentation.

RESULTS AND DISCUSSION

Socio-economic conditions are conditions or positions that are regulated in a particular social context, as is the case with ownership relating to status, for example, income, employment and education (Soekanto, 2001). There are three indicators which can describe the socio-economic condition of seaweed farmer which can also be used to measured class social, namely education, occupational status, and income (Nichol, Brown, dan Haynes, 2011). The following is a description of the indicators of socioeconomic of seaweed farmers in Nemberala Village based on research results:

Education is one of the factors that influence socio-economic status and condition. Besides, education can help people to prepare themselves in the future. As stated by Sedarmayanti (2003), that through the education, someone is prepared to have the provision to be ready to know, understand and develop the methods of critical thinking system to solve problems which will be faced in the future. It can be concluded that education is very helpful for someone to live their life, including their social and economic life. The following is an overview of community education in Desa Nemberala in 2019:

Table 1 – Total Population of Nemberala Village based on Education of 2019

Education Level	Total Population		Number
	Male	Female	
Not attending school	93	103	196
Elementary	167	155	322
Junior High	89	95	244
Senior High	112	143	255
University	102	103	205

Source: Data was taken from each Neighbourhood Head (Kepala Rukun Tetangga) of March 2019.

The education level of the majority of the community in Nemberala Village is Elementary School graduate. However, the awareness about the importance of education is increasing from generation to generation, as seen from the considerable percentage of residents with diploma and bachelor's degree, which is 17% (205 people) in Nemberala Village. Generally, the communities who work as seaweed farmers still have low education, which is elementary school graduate. This was because the seaweed farmers are generation X who were previously difficult to obtain an education.

The improving of parent's awareness about the importance of education is one of the factors that contributed to improving the quality of education in Nemberala Village. Moreover, nowadays the education facility is accessible for the community. Moreover, since 1998 seaweed also took a big part to increase community education, because the income of community who is working as a seaweed farmer was rising rapidly. This factor indirectly impacts the community capacity in financing children education up to the level of higher education. Before working as a seaweed farmer, the number of community who were able to give proper education to their children was very limited. In addition to paying for school fees, the community also needs to prepare transportation costs, study materials, and allowances for their children. Currently, the children of seaweed farmers have started to pursue higher education to university level.

Job is another factor that becomes a benchmark to describe the socio-economic conditions of people in society. About 45% of the total population in Nemberala Village works as seaweed farmers, and the rest work as civil servants, private sector employees, etc. Below is a description of population in Nemberala village based on occupation:

Table 2 – Total Population of Nemberala Village based on Occupation of 2019

No	Type of Occupation	Number (People)
1	Civil servant	75
2	Honorary employee	27
3	Private sector employee	209
4	Seaweed farmer	317
	Total	628

Source: Data was taken from each Neighbourhood Head (Kepala Rukun Tetangga) of March 2019.

Apart from the above work, there are also several other jobs that have not been recorded by the local government, such as entrepreneurs (kiosk owners) and weavers. Today, most people choose to work as seaweed farmers, leaving their previous jobs because this work is more flexible on time, compared to other jobs. In addition, this work is also very easy and does not require special skills, even more economically profitable because people's income is higher, compared to other jobs.

The type of seaweed planted by the communities in Nemberala Villages is the green (SP) and brown seaweed types. The selling price of green seaweed from the collectors to farmers is around Rp18,000-Rp27,000/kg, while for the brown seaweed is priced at Rp8,000-Rp10,000/kg. The price of seaweed was not only determined based on the seaweed quality, but also predominantly influenced by the buying price of companies in Surabaya. The seaweed farmers were unable to initiate negotiations on the seaweed selling price, thus those who preferred not to sell their seaweed produce could be stored.

The average of seaweed farmers has an agricultural land stretching up to 30 *depak*/line, whereas the required capital for seaweed farming if the farmers have a 30 *depak* area of seaweed farmland (1 *depak* = 1.5 meter) are 10 kg nylon lines, 60 page of pig wood and 30 lines seedling seaweed. It costs around Rp8,500,000 for 30 *depak*/line seaweed farming. The working time of the seaweed farmers started from 14.00 Indonesian Central Time (WITA/Waktu Indonesia Tengah) up to 18.00 WITA, so that in the morning the people still have time to do other work, such as tapping Palmyra fruit, collecting copra, livestock farming, and weaving mats or making roofs from coconut leaves.

According to ISCO-08 (International Standard Classification of Occupation) in 2018, occupation is divided into 10 major groups, namely manager, professional, technicians and

associate professionals, clerical support workers, services and sales workers, skilled agricultural, forestry and fishery workers, craft and related trades workers, plant and machine operators, and assemblers, elementary occupations, and armed forces occupation. Based on that, seaweed farmer is the part of major group six which is skilled agricultural, forestry and fishery workers. Competent performance in seaweed farmer requires skill at the second ISCO skill level. Some of tasks which performed by seaweed farmer include: nursery, planting, and harvesting. The seaweed cultivation was performed traditionally by the community, by binding the seaweed onto a nylon line tied to a peg wood.

Furthermore, based on the classification of employment status issued by BPS in 2001, from 7 occupational categories, seaweed farmers were categorized as self-employed workers. In this case, seaweed farmer has to set the working time, overcome the challenges and bear the risks of work by their selves, and directly sell their produce to seaweed collectors individually. Some of the challenges that have been faced by seaweed farmer in Nemberala village are there were no excellent seedlings resistant to pest and water pollution, the distance of seaweed farmland is quite far from the seashore (around 200-500 m), and the existence of sea lice.

Another factor which also affects socioeconomic status in society is income. According to Soekanto (1992), that income from certain jobs can determine the level of social status. Being on the beach has its advantages for the people in Nemberala Village, one of which being seaweed farmers. Working as a seaweed farmer is currently still the main choice of the community in Nemberala village. Part of the community stated that their economic condition started to improve since seaweed was regarded as a livelihood. This can be seen from their houses if previously they admitted to have a house made of wooden walls and hay/Palmyra leaves roof, now their house have utilized concrete walls and zinc roof.

The average income of seaweed farmers was Rp1,000,000 – Rp3,000,000 per one time harvest. Prior to the oil spill incident of Montana, Australia, the seaweed harvest could be performed every week while today it could only be realized once or twice a month. In addition the existence of sea lice also effects the seaweed growth. If averaged every month, the total income of seaweed farmers in Nemberala Village is IDR 2,000,000 - IDR 6,000,000 per month. This income is very high compared to other jobs in Nemberala Village. Below is a description of community income in Nemberala village:

Table 3 – Community Income List in Nemberala Village in 2019

No	Type of Occupation	Income per month (Rp)
1	Civil servant	1,500,000-5,700,000
2	Honorary employee	250,000-1,000,000
3	Private sector employee	500,000-1,500,000
4	Weaving craftsmen	1,000,000-3,000,000
5	Owner of kiosk	500,000-2,000,000

Source: Managed by the Author Based on Results of Interviews in 2019.

When compared with working hours and wages obtained, the income of seaweed farmers is much higher than other jobs, because every day it is only needed 14.00-18.00 WITA or when the seawater recedes. As for another job such as civil servants, they have to work starting at 08:00 WITA - 16:00 WITA, as well as other jobs which also take longer than seaweed farmers. This is the reason why seaweed farmers are the most popular work done by the people of Nemberala Village.

Speaking of income, one important aspect to note is regional minimum wages. In 2019, the NTT provincial minimum wage was Rp1,793,298, but the government has not issued the Rote district minimum wage for 2019, but in 2017 amounting to Rp1,525,000 this amount is the same as NTT provincial wages in 2017, so it can be estimated that wages in Rote Ndao Regency in 2019 it ranged around Rp1,793,298. The income of seaweed farmer is higher two times than the minimum wage of NTT Province and Kupang City.

Based on BPS data, in 2014 the need for decent living in Rote Ndao District was fulfilled at a cost of Rp1,458,922 per month and the minimum wage level of Rote Ndao

District was around Rp1,010,000 per month. When compared, community income in 2014 was around 30.7% smaller than the community's decent living needs in Rote Ndao. If we look at the annual inflation rate in Indonesia where every year is around 8.5% per year, then the size of the community's decent living needs in 2019 by using the baseline needs for decent living in 2014, which is Rp2,193,715.

In addition, according to BPS data in 2008, revenues divided into 4 groups and seaweed farmers are classified as very high-income groups, because their income is around IDR 3,000,000 - IDR 6,000 per month. Seaweed farmer is one of the two works that categorized as the very high-income group category. This can be seen from their houses if previously they admitted to have a house made of wooden walls and hay/Palmyra leaves roof, now their house have utilized concrete walls and zinc roof. Moreover, with the high income, seaweed farmers afford to give proper education to their children and also buy a private vehicle, such as motorcycle and car.

CONCLUSION

In general, the socio-economic status of seaweed farmer in Nemberala village is in the middle class. In term of education, even though the seaweed farmer only graduates from elementary school, but the existence of seaweed has improved community ability to pay the tuition fee and another cost for education. While, in term of occupational status, seaweed farmer is one of the favorite jobs in Nemberala village and categorized as a very high-income group in the community. The fact that working as a seaweed farmer is not a professional job does not make seaweed farmer struggle to meet family needs, instead, they have the capability to build permanent housing, buy the vehicle, and provide proper education to their children.

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THE INFLUENCE OF WORK LIFE BALANCE AND ORGANIZATIONAL PRIDE ON JOB SATISFACTION AND ITS IMPACT ON ORGANIZATIONAL CITIZENSHIP BEHAVIOR IN FIVE AND FOUR STAR HOTELS EMPLOYEE

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ABSTRACT

This study aims to analyze the influence of work life balance on organizational citizenship behavior through organizational pride and job satisfaction. This research was conducted on 209 five-star and four-star hotel employees in Malang City with sampling techniques using proportionate stratified random sampling then analyzed using Generalized Structured Component Analysis (GeSCA). The results of this study indicate that work life balance has a positive and significant direct effect on organizational pride and job satisfaction. Organizational pride and job satisfaction also positively and significantly influence organizational citizenship behavior.

KEY WORDS

Work life balance, organizational pride, job satisfaction, organizational citizenship behavior.

One important aspect to improve a company's competitiveness in facing the competition is the company's Human Resources (HR). HR development is not only based on the role of HR individually but also needs to pay attention to the role of individuals as an integral part of the company's internal environment. The results of the survey conducted by Tower and Watson show that employees in Indonesia have the highest voluntary attrition rate in Asia Pacific namely equal to 20,35% (ekonomi.kompas.com/2016). The phenomenon of the high number of turnover / move work in hotels in Malang was revealed by Satwari, Al Musadieq, & Afrianty (2016) which stated that one of the four-star hotels in Malang experienced a high turnover / move work (29%). The desire to turn over / move work occurs possibly because of unachieved levels of job satisfaction that is influenced by the behavior of superiors where the employee works. Based on this matter need to be examined further regarding work life balance and employee job satisfaction.

Work life balance (WLB) has an important relationship with employee attitudes towards their organization, as well as for the lives of employees. According to Frame & Hartog (2003:4) work life balance means that employees can freely use flexible working hours to balance their work with other commitments such as family, hobbies, arts, studies, and not only focus on their work. Ronda et al. (2016) shows that work life balance has a significant effect on job satisfaction while the research conducted by Shujat et al. (2011) show that work life balance does not have a significant effect on job satisfaction. The difference in the results of this study needs to be further examined to find out the results of the study with certainty.

In addition to the work life balance variable, there are organizational pride variables that are proven could influence job satisfaction. This is evidenced by the results of a study conducted by Machuca et al. (2015) which shows the influence of organizational pride on job satisfaction significantly. Haslam (2004) suggests that organizational pride is a positive feeling of an individual to the group derived from the judgment of others on the status of the group.

Job satisfaction has implications for other variables, including Organizational Citizenship Behavior (OCB). OCB is defined as free behavior, not tied to the organization's formal reward system which conducted to improve organizational effectiveness (Chen et al., 2007). Shafazawana, et al. (2015) states that job satisfaction has a significant and positive

influence on OCB. Organ (1988) defines OCB as behavior that is an individual choice and initiative, not related to the organization's formal reward system but in aggregate increases organizational effectiveness. Therefore, it is very important to realize organizational citizenship behavior that is beneficial for the company. Companies must seek a climate that stimulates employees to behave extra roles that support the organization.

The Indonesian government today has developed the tourism sector as one of the national development priorities in 2018 (Bapenas, 2017). Hotel is one of the businesses that are developed to sustain the development of the sector so that the estimated number of hotels will be more and more and the competition will be intense. Malang City is one of the leading tourism destinations in East Java. Besides from being a City of Tourism Destinations, Malang City also functions as a support for Batu City Tourism and Malang Regency, especially in providing accommodation services. With this role, the development of the hotel occurred quite significantly. This study aims to examine and analyze the effect of work life balance on organizational pride and job satisfaction as well as its impact on organizational citizenship behavior.

LITERATURE REVIEW

According to Kirchmeyer (2000) in Pouluse (2014) work-life balance is the achievement of satisfying experiences in all domains of life. Kirchmeyer stated that to achieve a satisfying experience in all domains of life requires personal resources such as energy, time and commitment to be well distributed throughout the domain. Individual actions balance three aspects of life, namely personal life, organization, and society can be called work-life balance (Pouluse, 2014). In Irfan (2015) work-life balance is a broad concept which prioritizes between "work" (career / ambition) on one side and then "life" (pleasure, vacation, family and spiritual development) on the other side. According to Khan (2016) balance in the work-life balance context is a very subjective concept that implies a satisfying relationship felt by someone between the domain of life and work.

Haslam (2004) suggests that organizational pride is a positive feeling of an individual to the group derived from the judgment of others on the status of the group. Furthermore, according to Guthier and Rhein (2011) organizational pride consists of two types, namely emotional and attitudinal. The emotional type of organizational pride is the pride felt by individuals because of the success of an activity related to the organization. Then because it is in the form of emotion, this type of organizational pride is temporary, Whereas the type of attitudinal refers to the pride felt by individuals in their organization that comes from the general perception of the organization. Attitudinal leading to individual cognitive so that it can last long.

According to Robbins (1990) in (Prawinegoro, 2016: 192) job satisfaction is the attitude of workers who assess the difference between the amount of rewards received with what is believed to be accepted. Luthans (2011) provides a comprehensive definition of job satisfaction which includes reactions or attitudes of cognitive, affective, and evaluative and states that job satisfaction is a happy emotional state or positive emotion that comes from a job assessment or someone's work experience. Job satisfaction is the result of employees' perceptions of how well their work provides things that are considered important. In general, job satisfaction is the most important and often learned attitude. To improve job satisfaction, companies must respond to employee needs, and this has once again indirectly carried out various human resource management activities as described previously. However, other actions still need to be done in a way called the improvement of work life quality.

Podsakoff et al. (2000), defines OCB as discretionary individual behavior, which does not directly and explicitly get expectations from a formal reward system, and which overall promotes the effectiveness of organizational functions. Free and voluntary, because the behavior is not required by the requirements of the role or description of the position that is clearly demanded based on a contract with the organization; but as a personal choice. Organ (1988) defines OCB as behavior that is an individual choice and initiative, not related to the organization's formal reward system but in aggregate increases organizational effectiveness.

This means that the behavior is not included in the job requirements or job descriptions so that if not shown, no punishment is given (Novliadi, 2007)

CONCEPTUAL FRAMEWORK

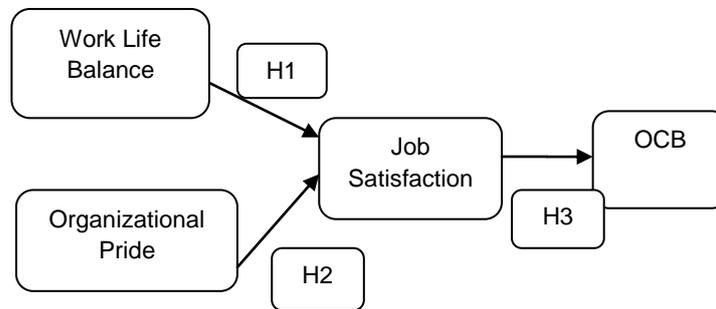


Figure 1 – Conceptual Framework

The hypothesis of this study are:

- H₁: Work life balance has a significant effect on job satisfaction;
- H₂: Organizational Pride has a significant effect on job satisfaction;
- H₃: Job satisfaction has a significant effect on organizational citizenship behavior.

METHODS OF RESEARCH

This study uses an explanatory (level of explanatory) pattern, meaning research that highlights the relationship between research variables and testing the hypotheses that have been formulated previously.

The population in this study are all permanent employees besides top managers who work in 4 and 5 star hotels in Malang City.

Based on the total population of 439 employees, the sample size can be determined using the Slovin formula with an error tolerance limit of 5% and a total sample of 209 respondents was obtained.. The sampling technique uses a simple random technique for each hotel proportionally for each stratum (proportionate stratified random sampling). Data from this study are primary data obtained directly using a questionnaire and then analyzed using Generalized Structured Component Analysis (GeSCA).

This study consisted of four variables, namely work life balance and organizational prides as exogenous variables, variables of job satisfaction and organizational citizenship behavior as endogenous variables.

The work life balance variable has four indicators adopted from Clark (2000) border, Permeability, Flexibility and Blending. Variable of Organizational pride has two indicators adopted from Machuca et al. (2015) emotional and attitudinal. Job satisfaction variables use indicators from Glueck (1994), namely colleagues, working conditions, team work, work atmosphere and providing protection and shelter. Variable of organizational citizenship behavior has five indicators adopted from Organ (1988), namely altruism, Conscientiousness, civic virtue, sportsmanship and courtesy.

RESULTS OF STUDY

Based on the results of the respondents description from the study results can be seen that respondents who have male gender equal to (64.6%) and female equal to (35.4%); age of respondent ≤ 25 years amounted to (15.8%), 26 - 35 years amounted to (47.4%), 36 - 45 years equal to (23.9%), and ≥ 46 years equal to (12.9%); work duration of respondents for ≤ 10 years equal to (80.9%), 11 - 20 years amounted to (18.2%), 21 - 30 years equal to (0.5%),

and ≥ 30 years amounted to (0.5%); marital status of respondent who are married equal to (76.6%) and not married amounted to (23.4%).

Evaluation of measurements in the GeSCA analysis can be carried out for measurement models, structural models and overall models. The analysis results of the goodness of fit of the overall model as presented in Table 1.

Table 1 – Result of Goodness of fit Index (Inner Model)

Goodness of fit Index	Cut of Value	Result
FIT	> 0,500	0,731
AFIT	> 0,500	0,728

Source: Results of the GeSCA processed, 2018.

FIT shows the total variance of all variables that can be explained by a particular model so that the proposed model can explain all existing variables with a value of 0,731, in other words, the diversity of work life balance, organizational pride and job satisfaction overall on organizational citizenship behavior which can be explained by this model is equal to 73,1% and the rest (26,9%) is explained by other variables. Means the model is good enough to explain the phenomenon reviewed.

The measurement model of work life balance, pride organization, job satisfaction and organizational citizenship behavior variable respectively can be seen from the explanation which emphasized on the amount of loading factors > 0,5, average variance extracted (AVE) value > 0,5 and Cronbach Alpha coefficient > 0,7. Based on the results of the research data, the results showed that each indicator of the variable showed the value of loading factor and AVE > 0,5 and the Cronbach alpha coefficient > 0,7.

The last stage of the model measurements from GeSCA is hypothesis testing. The testing criteria state that if the critical ratio value has asterisk marked ($CR \geq T\text{-table} = 2.00$) then it is stated that there is a significant effect of exogenous variables on endogenous variables. The results of the analysis can be found through a summary of Table 2.

Table 2 – Hypothesis Testing

Xogenous Variable	Endogenous Variable	Estimate	SE	CR
Work Life Balance	Job Satisfaction	0.634	0.039	16.43*
Organizational Pride	Job Satisfaction	0.618	0.043	14.26*
Job Satisfaction	Organizational Citizenship Behavior	0.603	0.048	12.66*

* $p\text{value} < 0.05$; $FIT = 0.596$; $GFI = 0.996$.

The hypothesis testing of the effect of work life balance on job satisfaction produces a critical ratio (CR) of 5.570*. This shows that the value of the critical ratio has the asterisk marked ($CR > T\text{-table} = 2.00$). Therefore, it can be interpreted that there is a significant effect of work life balance on job satisfaction.

The hypothesis testing of the influence of organizational pride on job satisfaction produces a critical ratio (CR) of 0.470. This shows that the value of the critical ratio (CR) does not have an asterisk marked ($CR < T\text{-table} = 2.00$). Therefore, it can be interpreted that there is no significant effect of organizational pride on job satisfaction.

The hypothesis testing of the effect of job satisfaction on organizational citizenship behavior produces a critical ratio (CR) of 3.260*. This shows that the value of the critical ratio (CR) has an asterisk marked ($CR > T\text{-table} = 2.00$). Therefore, it can be interpreted that there is a significant effect of job satisfaction on organizational citizenship behavior.

DISCUSSION OF RESULTS

The results of the analysis show that work life balance has a significant positive effect on job satisfaction. In other words, it can be said that the ability to balance the demands of work with their family commitments, as well as other non-work responsibilities will further increase job satisfaction. Through work life balance, employees can meet their personal and

family needs in their work environment. With the fulfillment of employee needs, of course it will lead to satisfaction. Work life balance has an important relationship with employee attitudes towards their organization, as well as for the lives of employees.. According to Frame & Hartog (2003: 4) work life balance means that employees can freely use flexible working hours to balance their work with other commitments such as family, hobbies, arts, studies, and not only focus on their work.

The results of this study reinforce previous research that has analyzed the relationship of Work Life Balance (WLB) to job satisfaction, among others, carried out by Haar et al (2014) and supports the results of research conducted by Ronda et al (2016).

Based on the modeling results indicate that organizational pride variables have no significant effect on job satisfaction, in other words that the stronger the sense of pride of employees on company reputation does not always directly increase job satisfaction. Organizational pride refers to positive feelings of an individual to the group derived from the judgment of others on the status of the group (Alexander Haslam, 2004:77). The pride of an employee for the company where he works is very needed. The Organizational Pride will form the smoothness process of employees' duties implementation in the organization so that the work effectiveness of employees in the work organization can be realized and it will support the realization of employee job satisfaction.

The results of this study are not consistent with the results of previous studies that analyzed the relationship of organizational pride to job satisfaction conducted by Machuca et al (2015), which one of the results of his research shows that employees who feel proud of the work in the company will also feel satisfaction in the job (job satisfaction). While the results of the study of Gouthier and Rhein (2011) which found that organizational pride indirectly has a significant effect on the level of work turnover (turn over intention) which is one indication of employee job satisfaction (job satisfaction).

The research results showed that job satisfaction has a significant positive effect on organizational citizenship behavior, in other words that the stronger job satisfaction has a significant effect on the formation of organizational citizenship behavior variable. Job satisfaction is generally defined as various constructs that include employees' feelings about various things both intrinsic and extrinsic elements in the work (Wayne, 2006). In other words, job satisfaction reflects the feelings of happy (likes) or not happy (dislike) from employees towards their work. If the employee feels satisfied with his job, he certainly will behave positively in his workplace and give the best contribution to the organization where he works, including doing something beyond his duty and obligation that reflects Organizational Citizenship Behavior (OCB).

The results of this study provide empirical support for the Social Exchange Theory (Blau, 1964) which states that in social interactions if one party benefits then it will try to return the favor. The results of this study are also consistent with previous research which aims to examine and analyze the relationship between job satisfaction and Organizational Citizenship Behavior (OCB), among others, carried out by Foote and Tang (2007).

CONCLUSION AND RECOMMENDATIONS

Based on the testing of the hypothesis, the results of the discussion, and the findings of the study then it can be stated the following conclusions:

- Work life balance has a significant effect on job satisfaction. This means that the higher the employees work balance will increase the job satisfaction of employees in five-star and four-star hotels in Malang City;
- Organizational Pride has a significant effect on job satisfaction. This shows that the stronger the sense of employees pride on the company's reputation then the job satisfaction of employees in five-star and four-star hotels in Malang will increase;
- Job satisfaction has a significant influence on organizational citizenship behavior. This shows that the higher the level of employee satisfaction will further shape the good organizational citizenship behavior for employees of five-star and four-star hotels in Malang city.

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CORPORATE CITIZENSHIP IMPLEMENTATION AT PT UNITED TRACTORS, TBK: A SYSTEMATIC REVIEW

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ABSTRACT

Corporate Citizenship measures four dimensions namely economic, legal, ethical and philanthropic which have strategic values and have a positive impact on the company. PT United Tractors, Tbk implements good corporate governance (GCG) as an effort to improve the performance of a company. GCG is part of the roadmap towards Corporate Citizenship so that its implementation is reviewed based on four dimensions. The economic dimension, that is, the company has an economic function proven by the company experiencing growth in the assets, income and profits of the company. The implementation of the law shows that the company integrates legal compliance into the company's strategy, this shows the implementation of the legal dimension. The implementation of the management system in the company is part of the implemented ethical dimension. For the dimension of philanthropy can be seen from companies that use the AGC and AFC guidelines to guide them to become environmentally friendly and social responsible companies managed under the Public Contribution Roadmap framework. After knowing the implementation of Corporate Citizenship in the company, the next step is to quantitatively measure its implementation and the influence that has been given to the company.

KEY WORDS

Corporate citizenship, economics, legal, ethical, philanthropy.

Corporate Citizenship is a core element of business strategy in meeting economic, social, and political demands and to enhance the role of the company in the decision making process, with three strategic value points namely market benefits in differentiation and cost reduction, anticipating constraints and preventing risks and meeting environmental needs (Eberhard, 2011). As legal entities with rights and duties such as citizens of the countries in which they operate (Matten, 2003), companies establish Corporate Citizenship with a leadership foundation at all levels, employee engagement, measured financial systems and public-private partnerships (Economist Intelligence Unit, 2008). According to Carrol, 1998 the Corporate Citizenship is a derivative of the conceptualization of the role of business in society in the management literature, where the most dominant derivative is dominated by the idea of CSR (Corporate Social Responsibility) which measures four dimensions:

- Economy, which is profitable (fulfilling the company's economic responsibilities);
- Legal, which is obedient to the rule of law (fulfilling corporate legal responsibilities);
- Ethics, which is ethical behavior (response to the company's ethical responsibilities);
- Philanthropy, which is to contribute to giving back to the environment what has been received.

The impact of Corporate Citizenship on the company can be positive for several things, namely reputation management, profile and risk management, recruitment, motivation and employee retention rates, investor relations and access to capital, learning and innovation, competitiveness and market position, efficient operations and operating permit (Little, 2003). With this positive value, a review is needed to determine the implementation of Corporate Citizenship in companies based on literature as secondary data owned by the company.

METHODS OF RESEARCH

This research methodology uses a systematic review method by taking qualitative data collected from secondary data for research purposes. The stages in systematic review consist of identification review, initial article screening, advanced article screening and article evaluation (Fitroh & Utama, 2017). The results of systematic review of this review and packaging of research results into actionable messages (policy brief and policy paper) are comprehensive and balanced facts presentation formats for policy makers (Siswanto, 2010). This research was conducted to answer the implementation of Corporate Citizenship at PT United Tractors, Tbk.

RESULTS AND DISCUSSION

PT United Tractors, Tbk (United Tractors) is a company listed on the Indonesia Stock Exchange, whose shares are owned by the public 40.5% and owned by PT Astra International 59.5% established since 1972 with the main business being trading tools heavy in the construction sector with the brands Komatsu, Scania, UD Truck, Tadano and Bomag (UT Annual Report, 2017). As a trading company, in addition to selling products, United Tractors also provides after-sales services, namely sales of spare parts and repair services with major customers, namely companies engaged in the mining, agriculture, forestry, construction and transportation sectors. In its activities, United Tractors implements good corporate governance (GCG) and implements corporate social responsibility (CSR). Good Corporate Governance (GCG) as an effort to improve the performance of a company / organization and become a guideline for company leaders in making decisions and carrying out actions based on high morals, compliance with applicable laws and regulations and awareness of social responsibility the company to stakeholders (stakeholders) consistently. What is done is a Roadmap that starts from good corporate governance (GCG) that is fulfilling the provisions of regulations in corporate governance to be a good corporate company that can effectively control business operations, especially business risk aspects, to become good corporate citizens namely industrial citizens and social communities. ethical and responsible.

The economic dimension of Corporate Citizenship, namely the view of the economy as a good individual citizen is that he can support himself and is not a burden on other parties, where the company's economic responsibility is to generate profits in a way that is not contradicting good corporate citizenship. Therefore as a form of participation in society and being a good citizen, companies work to generate sufficient income to pay costs and share profits with investors for their investments and other stakeholders guaranteed business continuity, product flow, services, jobs, and other benefits provided by the company (Carrol, 1998). In accordance with UT Annual Report, 2017, the company economically experiences growth in assets, revenues and profits of the company with several parameters, where in 2017 the company experienced a 29% increase in assets to Rp 82.3 trillion, net income rose 48% to Rp 7.4 trillion, market capitalization reaches Rp 132 trillion. Besides being a public company that shares its profits with shareholders, in 2017 the profits distributed per share increased by 48% from Rp 1,341 to Rp 1,985. In the past five years, the company's assets have grown annually from Rp. 57.4 trillion in 2013 to Rp. 82.3 trillion in 2017.

The legal dimension of good Corporate Citizenship, such as the person, also obeys the law by seeing it as codified ethics (which is recorded as a rule), so that when business ethics are all right, good and fair for business, the law is made to realize standards - these standards are in business performance, so that to create them legislation is designed to regulate relationships with key stakeholders such as customers, employees, society and the environment. If the business wants to be considered and admired as good corporate citizenship, it must comply with these laws and integrate legal compliance into its corporate strategy and operational management (Carrol, 1998). The legal dimension of Corporate Citizenship is in line with the principles of GCG, where the World Bank defines GCG is a collection of laws, regulations and rules that must be fulfilled that can drive the performance

of company resources to work efficiently, generate sustainable long-term economic value for shareholders and the surrounding community as a whole (Iskander and Chamlou, 2000). United Tractors' commitment to law is manifested by the company with an internal control system that includes financial risk, effectiveness of operational activities, and compliance with applicable laws and regulations (UT Annual Report, 2017). The implementation of Good Corporate Governance (GCG) is in line with applicable regulations including the Law of the Republic of Indonesia No. 40 of 2007 concerning Limited Liability Companies ("Law No. 40/2007") and Law of the Republic of Indonesia No. 8 of 1995 concerning Capital Markets (UT Annual Report, 2017). Management of employees in the company refers to the Law of the Republic of Indonesia No. 13 of 2003 concerning employment and derivative rules. The company's health and safety system is based on the Law of the Republic of Indonesia No. 1 of 1970 concerning work safety with the aim of managing the K3 aspect is the achievement of a zero lost time injury (Zero LTI) condition in all operational areas with one of the reference performance indicators being a measure of frequency rate (FR) and severity of work accidents/severity rate (SR).

The ethical dimension of Corporate Citizenship views that exemplary businesses not only have value because they are economically successful and comply with the law, but try to run it ethically. When the legal dimension refers to "minimum" behavior, a norm is needed to discuss social problems that can arise. Business ethics related to concepts and practices of acceptable business behavior in interacting with various stakeholders, an important aspect of business ethics is "knowing ethics" and "doing ethics" (Carrol, 1998). Good corporate citizenship will distinguish two moral philosophies, namely descriptive ethics related to describing organizational behavior (what is being done) and normative ethics relating to the provision and justification of an appropriate moral system (what must be done), so it needs to be more interested in what should be done than what is being done. Virtuous citizens, both personal and corporate, will also be virtuous in their actions, decisions and practices. Good corporate citizenship requires companies and managers to lead with strong ethical values and implement them and in accordance with the law and display ethical leadership in the community by using good ethical principles or character to bring about right and fair behavior and actions so that the organization strives for ethical excellence to be able to ensure they have a solid future (Carrol, 1998). Implementation of management systems is a series of activities (cycles) that are sustainable from the organization to achieve goals in accordance with the wishes of stakeholders. To ensure the implementation of a standard management system in the company, an audit system is carried out periodically, one of which is ethics. The ISO portfolio provides practical tools for all three dimensions of sustainable development, namely economic, environmental and social. In its implementation due to violations of this management system, for example a company performing poor environmental performance can cause customers to boycott products and services, with the consequence of financial loss. In extreme cases, the general public can also take direct action that is blocking or even stopping company operations (Morris, 2004). To continue to maintain and improve the Information Technology Governance standard at United Tractors, the Corporate Strategic and Technology (CST) division applies ISO 20000: 2011 (Information Technology Management Services) and 27001: 2013 (Information Security Management System). The Risk Management System implemented since 2006 and refers to ISO 31000 and the Astra Risk Management Framework. In CSR practice the company applies ISO 9001: 2008, ISO 14001: 2004, OHSAS 18001: 2007, Occupational Health and Safety Management System (SMK3) according to PP No. 50/2012, and the PROPER standard (Corporate Performance Rating Program) in accordance with Minister of Environment Regulation No. 3/2014. A series of company internal policies related to GCG include the whistleblowing system. In implementing the internal control system, the company adopted the Standard IIA (Institute of Internal Auditors) and the COSO Framework. The company also uses the Astra Green Company (AGC) and Astra Friendly Company (AFC) guidelines to guide initiatives to become environmentally friendly and socially responsible companies. Contractor Safety Management System (CSMS) This system manages the performance of

contractors in the Company's managed area, starting from the planning stage to the implementation stage.

Philanthropy is the desire to help humanity through charitable actions, whether carried out by private citizens, foundations, or companies that aim to improve the quality of life and to ensure a better future, where philanthropy is realized through corporate contributions known as a general definition from Corporate Citizenship (Carrol, 1998). This is inspired by the desire to improve life for others while at the same time improving life for oneself. Corporate citizenship is growing rapidly with a variety of popular initiatives, such as financing education for employees, promoting ethical training programs, supporting environmentally friendly policies and sponsoring community events (Maignan and Ferrell, 2000). According to Moon Jeremi et al., 2005, Corporate citizenship is used to underline, expand or reorient certain aspects of CSR (Corporate Social Responsibility). The Astra Friendly Company (AFC) guideline provides the basis for meeting stakeholder expectations and implementing effective CSR initiatives. Stakeholders encourage companies to schedule social responsibility (CSR) when they formulate corporate citizenship policies to trigger companies to invest in social innovation and environmental responsibility (Camilleri, 2017). One of the company's missions is to generate sustainable added value for stakeholders through three balanced aspects in terms of economic, social and environmental aspects. United Tractors' core values were formed to reflect the philosophy of Catur Dharma which is the foundation of the Astra Group, which invites all employees to become beneficial property for the nation and state, provide the best service to customers, respect individuals and foster cooperation, and always strive to achieve best. The company uses the Astra Green Company (AGC) and Astra Friendly Company (AFC) guidelines that guide initiatives to become environmentally friendly and socially responsible companies, which are managed under the Public Contribution Roadmap framework. Public Contribution Roadmap begins with Creating an environmentally friendly company, then builds a harmonious relationship with the community and actively participates in community economic empowerment programs so that at the end it organizes CSR initiatives to improve people's quality of life, especially in the aspects of education and health. Astra Green Company (AGC) guides the implementation of Environmental Safety and Health initiatives to achieve 4 (four) target pillars, namely:

- Green Strategy that all aspects of the Environment, Occupational Safety and Health have become part of the strategy and business activities;
- Green Process that all processes and procedures are in accordance with Environment, Occupational Safety and Health regulations and standards both at national and international levels;
- Green Product that products and services are safe and environmentally friendly;
- Green Employees that Environment, Occupational Safety and Health integration in daily work by employees and related parties, through the provision of training and implementation of events that can improve Environment, Occupational Safety and Health awareness.

CONCLUSION AND SUGGESTIONS

In line with the vision of becoming global corporate citizenship, the company is fully committed to harmonizing business performance with the provision of benefits to society and the environment as part of corporate stakeholders carried out through the implementation of Corporate Social Responsibility (CSR) programs, with the aim of balancing economic performance achievement social aspects and aspects of environmental sustainability, namely to carry out the concept of triple bottom line (Portfolio, People, and Public Contribution Roadmap) in total (UT Annual Report, 2017). Based on secondary data from the company's annual report, it appears that the company has implemented corporate citizenship in four dimensions, both economic dimensions, legal dimensions, ethical dimensions and philanthropic dimensions. Implementation in the economic dimension, it can be seen that the company has an economic function that is generating enough income to pay for operational costs and share profits to investors as evidenced by the company experiencing growth in the

company's assets, income and profits. For the legal dimension, that is, complying with the company complies with laws and regulations and integrating legal compliance into the company's strategy and operational management, it can be seen that there is a legal basis that is obeyed and carried out in accordance with the state-regulated field. The application of the management system in the company including the application of ISO is part of the implemented ethical dimension. From the dimension of philanthropy, the implementation can be seen from companies that use the AGC and AFC guidelines to guide them to become environmentally friendly and socially responsible companies to achieve the company's mission of generating sustainable added value for stakeholders through three balanced aspects in economic terms, social and environment.

Having known the implementation of Corporate Citizenship, as written by Morrison et al., 2007 that companies choose corporate citizenship as a useful tool not only to improve the reputation of the public, but also to increase employee engagement. In accordance with the company's goal that it wants to be good corporate citizenship, but it has never been evaluated as to the extent of its achievement so that it is necessary to quantitatively measure its implementation and the influence given to the company. If this is done, it is hoped that workers will know their role in building corporate citizenship in the company so that they will make a positive contribution and the company knows the extent of the influence of corporate citizenship on the management of the company so that efforts are made to have a positive impact on it.

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CORRELATION BETWEEN JOB AUTONOMY AND PSYCHOLOGICAL CAPITAL WITH WORK ENGAGEMENT

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ABSTRACT

Work engagement has been considered as a key indicator of organizational health because it significantly influences employees' performance, job satisfaction, turnover intensity, and organizational success. Based on The JD-R Theory, job resources and personal resources could affect work engagement. The study aims to explain the correlation between job autonomy and psychological capital with work engagement. This study was conducted on employees with a total subject of 106 people. The data collection instruments used in this study are UWES (Utrecht Work Engagement Scale), The Measurement of Work Autonomy, and PCQ (Psychological Capital Questionnaire). Data analysis was performed using statistical techniques of multiple regression and Pearson correlation with the help of IBM SPSS for Mac Version 22.0. The results of this study show: 1) Job autonomy and psychological capital have a correlation with work engagement ($F=38,952$; $p<0,05$). Job autonomy and psychological capital give 43,1% ($R^2=0,431$) effective contribution; 2) Job autonomy has a correlation with work engagement ($r=0,346$; $p<0,05$); 3) psychological capital has a correlation with work engagement ($r=0,656$; $p<0,05$). The company could empower the employee on considering work methods, schedules, and goal criteria. The company may give reward stimulation. The employee could increase their performance by reaching goal targets and give each other compliments and positive experience.

KEY WORDS

Job autonomy, psychological capital, work engagement.

Bakker et al., (2008) stated the need for research on Positive Organizational Behavior (POB), learning and application of positive human resource-oriented and psychological functions that can be measured, developed, and regulated for performance improvement in the current company (Luthans, 2002 in Bakker & Demerouti 2008). Work engagement has a relevant influence on the company such as employee performance (Demerouti & Cropanzano, 2010), the creativity and charisma of the leader (Bakker and Xanthopoulou, 2013), also well being for each individual and work team (Salanova et al., 2003 in Costa, Passos & Bakker, 2016). Therefore, this study will focus on work engagement as one of the positive organizational behaviors.

Work engagement is a positive, fulfilling, work-related experience that includes three complementary dimensions: an energetic (i.e. vigor), and affective (i.e. dedication) and a cognitive dimension (i.e. absorption) (Schaufeli & Bakker, 2004). According to The JD-R Model of work engagement, job demands and job resources can predict work engagement (Bakker & Demerouti, 2008). Job demands refer to those physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological (cognitive and emotional) effort or skill and are therefore associated with certain physiological and/or psychological costs. Job resources refer to those physical, psychological, social, or organizational aspects of the job that (a) are either/ or functional in achieving goals, (b) reduce job demands and the associated physiological and psychological costs, and (c) stimulate personal growth, learning, and development (Bakker & Demerouti, 2007). Job resources refer to social support, performance feedback, and autonomy (Bakker & Demerouti, 2008).

Further, Xanthopoulou et al., (2007) expanded the JD-R Model by showing that job and personal resources are mutually related and that personal resources can be independent

predictors of work engagement. Personal resources are aspects of the self that are generally linked to resiliency and refer to individuals' sense of their ability to control and impact upon their environment successfully (Hobfoll et al., 2003 in Bakker & Leiter, 2010). Halbesleben research (in Bakker & Leiter, 2010) shows that engagement is very influential with resources, especially those that focus on social support, autonomy and self-efficacy which are aspects of psychological capital. Xanthopoulou et al., (2007) stated that job resources and personal resources could affect work engagement.

On this study, we focused on job autonomy as a job resource and psychological capital as personal resources. Both predicted have a correlation with work engagement. Job autonomy and psychological capital act as intrinsic motivation. Both are followed by a passion for developing and achieving goals, being involved in their growth, and focusing on their goals. Therefore, if employees have high job autonomy and high psychological capital followed by high work engagement as well.

Major Hypothesis: There is a correlation between job autonomy and psychological capital with work engagement.

Employees who have the freedom to do their jobs and manage their schedules will increase their motivation to achieve work goals, so they work with diligence, exert energy on their work, and feel enthusiastic about their work. Several studies have confirmed that autonomy and work engagement are positively correlated (Schaufeli & Bakker, 2004). De Spiegelare et al., (2014) research on job autonomy and work engagement shows that there is a correlation between job autonomy and work engagement.

Minor Hypothesis 1: There is a correlation between job autonomy with work engagement.

Employees, who have high psychological capital, are more confident to do challenging tasks and make positive attribution of success now or in the future, determine the direction to achieve success goals and can rise again when hit by problems. Based on the JD-R theory, psychological capital as a personal resource is an important and direct factor to predict work engagement. (Hobfoll, 1989, 2001 in Karatepe & Olugbade, 2009). The results of the S. Paek et. al., (2015) study state that there is a positive correlation between psychological capital and work engagement.

Minor Hypothesis 2: There is a correlation between job autonomy with work engagement.

METHODS OF RESEARCH

This quantitative research used survey methods. The subjects in this study were 106 employees of PT. Aneka Jasa Grhadika Gresik, East Java, Indonesia. There were three questionnaires used in this data collection. The first questionnaire is UWES (Utrecht Work Engagement Scale) ($\alpha = 0,921$), the second questionnaire is The Measurement of Work Autonomy ($\alpha = 0,831$), and the third questionnaire is PCQ (Psychological Capital Questionnaire) ($\alpha = 0,867$). The sampling technique used convenience sampling techniques. The data analysis technique used multiple regression techniques to and Pearson correlation. Multiple regression techniques used for the purpose to examine major hypothesis. Pearson correlation used for the purpose to examine minor hypothesis.

RESULTS AND DISCUSSION

Job autonomy and psychological capital are correlated to work engagement ($F=38,952$; $p<0,05$). Employees with high job autonomy and high psychological capital are followed by high levels of work engagement. Employees with low job autonomy and low psychological capital are followed by low levels of work engagement. From the multiple regression analysis obtained $R^2 = 0,481$. That means job autonomy and psychological capital can affect work engagement up to 48,1%, while the remaining 51,9% can be affected by other factors outside the research. The results of the study support the hypothesis, which states there is a correlation between job autonomy and psychological capital with work engagement.

Table 1 – Correlation between Job Autonomy and Psychological Capital with Work Engagement

Variable	F	p	R ²
Job Autonomy – Psychological Capital with Work Engagement	38,952	0,000	0,431

Table 2 – Correlation between Job Autonomy with Work Engagement

Variable	r	p
Job autonomy with work engagement	0,346	0,000

Job autonomy has a significant correlation with work engagement ($r = 0,346$; $p < 0,05$). Employees with high job autonomy also have high work engagement. The results of the study support the hypothesis, which states there is a correlation between job autonomy with work engagement. This result is in line with De Spiegelare et al., (2014) research on job autonomy and work engagement which stated that there is a correlation between job autonomy and work engagement.

Table 3 – Correlation between Psychological Capital with Work Engagement

Variable	r	p
Psychological Capital with work engagement	0,656	0,000

Psychological capital has a significant correlation with work engagement ($r = 0,656$; $p < 0,05$). Employees with high psychological capital can also have high work engagement. The results of the study support the hypothesis 3, which states there is a correlation between psychological capitals with work engagement. This result also supports the statement of Xanthopoulou et al, (2007) about personal resources that can predict work engagement.

CONCLUSION AND RECOMMENDATIONS

According to the result of this study, it can be concluded that there is a significant correlation between job autonomy and psychological capital with work engagement. Therefore, the company could empower their employees in terms of determining the method, scheduling, and criteria for achieving work targets. Giving autonomy might adjust to the employee's character.

Employees could improve their ability to work with the success of achieving goals, so the managers or supervisors could give trust to employees in the form of flexibility in determining methods, scheduling, and achievement criteria

Companies can provide stimulation with rewards and recognition for employees who successfully carry out their duties. It can build the employee's self-confidence to do more challenging tasks and make a positive attribution.

Employees may give each other compliments, and appreciate positive experiences, so they can increase their confidence and be more optimistic about their achievements in doing the challenging tasks. It can also increase their work engagement.

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THE ROLE OF LEADERSHIP AGILITY AND ORGANIZATIONAL COMMITMENT TOWARD ORGANIZATIONAL READINESS FOR CHANGES IN PUBLIC ISLAMIC UNIVERSITIES OF CENTRAL JAVA IN CONDITIONS OF VUCA ERA

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ABSTRACT

The VUCA era requires the role of leadership agility and organizational commitment for organizational readiness for change. For its readiness to change, the Public Islamic Universities in Central Java require leadership agility and organizational commitment from the academic community. This study aims to test the influence of Leadership Agility and Organizational Commitment toward Organizational Readiness for Change. This study is conducted in five Public Islamic Universities in Central Java, namely Institut Agama Islam Negeri (IAIN) Pekalongan, Universitas Islam Negeri (UIN) Semarang, Institut Agama Islam Negeri (IAIN) Salatiga, Institut Agama Islam Negeri (IAIN) Purwokerto, Institut Agama Islam Negeri (IAIN) Surakarta. These five universities have done the practice of leadership agility. The respondent of this study is 100 people, which taken using disporportional or disporportionate stratified random sampling method. This method is done by taking sample with not paying attention to the comparison of the number of members between subpopulation. The data analysis is performed using Partial Least Square. The result of this study shows that the variable of Leadership Agility has an influence toward Organizational Readiness for Change of 0.625, while Organizational Commitment has an influence of 0.264. The result of this study is expected to be used in creating guidelines for Leadership Agility, building agile value, principles, and implementation or agile practice in Public Islamic Universities in Central Java.

KEY WORDS

Leadership agility, organizational commitment, organizational readiness for change, VUCA.

Speeding the development acceleration is one of the characteristics of the VUCA era that is called Volatility, which means progressive increase in the four dimensions of change, namely: type, speed, volume, and scale (<http://sumberdaya.ristekdikti.go.id/index.php/2018/04/20/memaknai-kehadirandoson-asing-ke-indonesia/>, accessed on April 24, 2018). Leading in the VUCA era nowadays (unstable, uncertain, complicated, and ambiguous) becomes increasingly difficult, since the VUCA era requires the ability of leaders to prepare the human resources they lead to be ready to face fast changes that are difficult to predict (Horney, et al., 2010).

The VUCA era requires Leadership Agility, which is the ability of a leader to dynamically feel and respond to changes in the business environment with focused, fast, and flexible actions. The organization must be prepared to change (Madsen, 2005). Agility and the ability to maneuver depend heavily on the agility that makes rapid changes in responding quickly. This especially happens on universities, since the process of managing the institutions in universities is very complex and diverse (Mukerjee, 2014).

Organizational readiness for change requires the role of organizational commitment (Eby, 2000). Organizational commitment that is shown in the involvement of human resources to change supports the organizational readiness for change (Weber & Weber, 2001).

Public Islamic Universities in Central Java which includes of Institut Agama Islam Negeri (IAIN) Surakarta, Institut Agama Islam Negeri (IAIN) Salatiga, Institut Agama Islam Negeri (IAIN) Purwokerto, Universitas Islam Negeri (UIN) Walisongo Semarang, dan Institute

Agama Islam Negeri (IAIN) Pekalongan require organizational readiness for change. Therefore, it needs leadership agility and organizational commitment from the academic community. It is very important to design and plan change in strategic management in Public Islamic Universities in Central Java.

LITERATURE REVIEW

The study conducted by Armenakis, et al. (1993) concluded that the readiness for change is related to beliefs, attitude, and intention of the member of organization to change. According to Backer, (1995), organizational readiness to change needs to pay attention to the dynamics of complex human resources. The involvement in planning for change affects their readiness for change. The study from Holt, et al (2007) showed that the instruments of organizational readiness for change are assessed from the characteristics of psychometric instrument. From the previous studies, the importance of correlating the role of leadership agility towards organizational readiness for change was not found. According to Lediju, (2016), leadership agility is the ability to lead effectively when there are rapid changes, uncertainty, increased complexity, and when considerations from various views and priorities for success are needed. The finding from showed how leaders in the public sector act. Leadership agility has a significant influence toward commitment and productivity of millennium organization. The study conducted by Joiner, & Josephs, (2007) found that leadership agility is a leader who is skilled to implement four types of leadership agility that reinforce each other in high turbulent environments.

According, there is four types of leadership agility, namely: (1) Context-Setting Agility, which is the ability to determine the optimal scope of initiatives and clarify desired results; (2) Stakeholder Agility, leaders use "stakeholder" to identify an initiative, as well as understand and assess the extent to which their views and goals are aligned; (3) Creative Agility, which is the ability to found creative solutions; (4) Self-Leadership Agility, which is the agility to lead himself and mastering self-leadership, "If we ever hope to be effective leaders of others, we need first to be able to lead ourselves effectively." (Neck and Manz, 2012).

The finding from Visagie and Steyn (2011) showed that affective and normative commitment has a positive relationship with readiness for change. The study from Holt, (2007) concluded that readiness for change is a multidimensional construct influenced by beliefs among employees, that: (a) they are able to apply the proposed changes, (b) proposed changes are appropriate for the organization, (c) leaders are committed to proposed changes (i.e. management support), and (d) proposed changes are beneficial to organizational members (i.e. personal valence).

Organizational commitment is a person's mindset towards the organization to what extent its own values and objectives are in accordance with those in the organization (Mowday et al, 1982). According to Mathews and Shepherd (2002), organizational commitment is a strong belief and acceptance of employees towards organizational goals and values. With a strong organizational commitment, employees will strive to maintain the membership with the organization. Organizational commitment is the promise of an employee to be dedicated to his organization (Zangaro, 2001). The three main components of organizational commitment are: (1) Identification, connection, and pride of employees; (2) Engagement; and (3) Loyalty to institutions (Cook and Wall, 1980). The study from Madsen, et al (2005) found the relationship between organizational commitment and organizational readiness for change. When employees feel committed to their organization (loyal, engaged, and identified), the level of organizational readiness for change becomes better.

Organizational readiness for change refers to the commitment of change of every member of organization and applies it to organizational change (Weiner, 2009).

H1: Organizational Commitment has a significant influence toward Organizational Readiness for Change.

H2: Leadership Agility has a significant influence toward Organizational Readiness for Change.

METHODS OF RESEARCH

The type of this study is quantitative research. The population of this study is the academic community of Public Islamic Universities in Central Java, namely Institut Agama Islam Negeri (IAIN) Surakarta, Institut Agama Islam Negeri (IAIN) Salatiga, Institut Agama Islam Negeri (IAIN) Purwokerto, Universitas Islam Negeri (UIN) Walisongo Semarang, and Institut Agama Islam Negeri (IAIN) Pekalongan. There are 100 respondents that become the sample of this study, which is taken using disproportional or disproportionate stratified random sampling. This method is carried out by taking samples without paying attention to the comparison of the number of members between subpopulation. The data analysis is performed with Partial Least Square.

RESULTS AND DISCUSSION

Table 1 until 4 describes that all items and variables have a good validity and reliability. Therefore, all questionnaire items have a good outer model.

Table 1 – Convergent Validity Test with 36 Indicators

	Leadership Agility	Organizational Commitment	Organizational Readiness for Change
x1	0.817		
x2	0.829		
x4	0.890		
x5	0.853		
x6	0.875		
x7	0.854		
x8	0.861		
x9	0.862		
x10	0.748		
x11	0.743		
x12	0.809		
x13	0.819		
x16		0.771	
x17		0.720	
x18		0.833	
x19		0.815	
x20		0.854	
x21		0.851	
x22		0.790	
x23		0.813	
x24		0.782	
y1			0.763
y2			0.781
y3			0.754
y4			0.693
y5			0.706
y6			0.656
y7			0.729
y8			0.699
y9			0.743
y10			0.632
y11			0.762
y12			0.781

Table 2 – Discriminant Validity Test

n/n	Leadership Agility	Organizational Commitment	Organizational Readiness for Change
x1	0.817	0.735	0.729
x2	0.829	0.617	0.719
x4	0.890	0.683	0.775
x5	0.853	0.804	0.759
x6	0.875	0.710	0.817

n/n	Leadership Agility	Organizational Commitment	Organizational Readiness for Change
x7	0.854	0.690	0.759
x8	0.861	0.703	0.801
x9	0.862	0.670	0.770
x10	0.748	0.667	0.513
x11	0.743	0.738	0.522
x12	0.809	0.797	0.587
x13	0.819	0.777	0.591
x16	0.633	0.771	0.754
x17	0.545	0.720	0.692
x18	0.612	0.833	0.597
x19	0.596	0.815	0.594
x20	0.695	0.854	0.645
x21	0.662	0.852	0.605
x22	0.835	0.790	0.649
x23	0.813	0.816	0.602
x24	0.782	0.796	0.578
y1	0.641	0.726	0.763
y2	0.619	0.746	0.781
y3	0.615	0.754	0.758
y4	0.551	0.431	0.690
y5	0.619	0.513	0.706
y6	0.478	0.331	0.656
y7	0.696	0.575	0.729
y8	0.670	0.551	0.699
y9	0.608	0.581	0.743
y10	0.509	0.494	0.632
y11	0.643	0.552	0.762
y12	0.673	0.569	0.762

Table 3 – Reliability Test

n/n	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Leadership Agility	0.931	0.933	0.943	0.647
Organizational Commitment	0.959	0.965	0.964	0.691
Organization Readiness for Change	0.918	0.922	0.93	0.527

Table 4 – Model Accuracy Test

R Square	R Square Adjusted
0.742	0.737

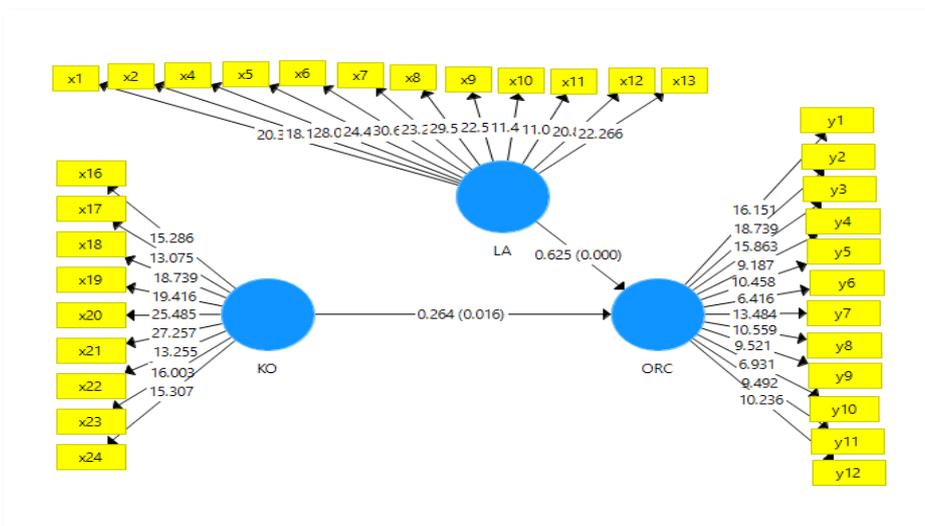


Figure 1 – Structural Model Between Latent Variables

Table 5 – Hypothesis Test

n/n	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ((O/STDEV))	P Values	Decision
Organizational Commitment -> Organizational Readiness for Change	0.264	0.271	0.109	2.412	0.016	H1. Accepted
Leadership Agility -> Organizational Readiness for Change (H2. Accepted)	0.625	0.620	0.104	6.039	0.000	H2. Accepted

The result of the hypothesis test in this study can be seen from the P value, which has the cutoff of ≤ 0.05 . In other words, if the P value is greater than 0.05, then the independent variable does not have an influence on the dependent variable. The analysis result of this study shows that the all of the P value are below 0.05, thus:

1. Organizational Commitment has a significant influence toward Organizational Readiness for Change;
2. Leadership Agility has a significant influence toward Organizational Readiness for Change.

An agile approach promotes agility or agile leadership to have an influence on organizational readiness for change which prioritizes serving leadership as a way to empower human resources. Serving leadership agility focuses on understanding, and refers to the needs and development of human resources to achieve the best performance.

The focus of leadership agility shifts from “managing coordination” to “facilitating cooperation”. Leaders encourage everyone to be able to issue the ability to think and work as well as possible. Agile leaders encourage organizations to understand, be responsible for organizational performance, and create acceptable solutions. Agile leaders encourage collaborations and communications within the organization. They conduct collaboration through interactive meeting, informal dialogues, and knowledge sharing. Agile leaders become a bridge as well as coach, rather than making decisions whose responsibilities must be carried out by others.

Agile leaders closely monitor the processes that hinder organizational agility in the organizational readiness for change. The leaders in the Institut Agama Islam Negeri (IAIN) Surakarta, Institut Agama Islam Negeri (IAIN) Salatiga, Institut Agama Islam Negeri (IAIN) Purwokerto, Universitas Islam Negeri (UIN) Walisongo Semarang, and Institut Agama Islam Negeri (IAIN) Pekalongan have become agile leaders.

The indicators of leadership agility expertise are: 1) Skills in anticipating change; 2) Skills in generating self-confidence; 3) Skills in action; 4) Freeing thought; and 5) Results evaluation. Leadership agility behavior that carried out by leaders gives confidence that the organization is ready for change (organizational readiness for change) in facing the VUCA era. This is shown in the result of data processing which is obtained from several indicators, namely: 1) Feasibility; 2) Management Support; 3) Adoption of Changes; and 4) Personally Beneficial.

Organizational commitment in the academic community in five Public Islamic Universities in Central Java is enough to encourage the organizational readiness for change.

CONCLUSION AND RECOMMENDATIONS

Leadership Agility has a significant influence toward Organizational Readiness for Change, and the leaders in IAIN Pekalongan, UIN Semarang, IAIN Salatiga, IAIN Purwokerto, IAIN Surakarta has become agile leaders.

Organizational Commitment has a significant influence toward Organizational Readiness for Change. The organizational commitment in the academic community in five Public Islamic Universities in Central Java is good enough to encourage the organizational readiness for change.

This study shows that the leaders in Public Islamic Universities in Central Java have aligned the organization management with VUCA era. Further studies are required to explore

further with qualitative research approach. The result of this study can be used to arrange guidelines for leadership agility, build agile values and principles, and implement the practice of leadership agility in Public Islamic Universities in Central Java.

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ANALYSIS OF THE BENEFITS OF CORPORATE SOCIAL RESPONSIBILITY THROUGH THE TRIPLE BOTTOM LINE APPROACH AT PT. TIRTA INVESTAMA INDONESIA

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ABSTRACT

The role of Corporate Social Responsibility (CSR) has become increasingly important in the current era of globalization. This was triggered by the ecosystem of company activities to create business operational sustainability amid the local community environment. The implementation of CSR must emphasize economic, social and environmental aspects based on three basic principles which include profit, people and the planet (triple bottom line). This study aims to determine the extent to which the benefits of CSR carried out by PT. Tirta Investama. This research shows whether the company does not only focus on the interests to gain profit, but also focuses on the interests of the company's external environment. The research method used is a descriptive qualitative approach through deep interview to informants related to the research question in this study. The results of the study show that PT. Tirta Investama cannot ignore the role of the company's external environment, such as social, economic and environmental conditions of the local community. Concern for the community will have a big impact on increasing company profits and will create a sustainable competitive advantage. The conclusion in this study can be stated that PT. Tirta Investama has carried out CSR activities based on the triple bottom line, but the benefits received by the community have not been maximized and have not contributed significantly to improvements in the social, economic and environmental aspects of the local community.

KEY WORDS

Corporate social responsibility, triple bottom line, profit, people, planet.

The concept of Corporate Social Responsibility (CSR) has come to the attention of various parties and is often associated with sustainable development efforts (Bocken, Short, Rana, & Evans, 2014; Tate, Ellram, & Kirchoff, 2010). CSR affects the interests of social, economic and environmental, so that its application there is elements of externalities that not everything can be controlled company. Optimal CSR implementation requires directed and measurable synergy in order to obtain maximum final benefits. According to Elkington (1998) CSR is a business commitment to act ethically, operate legally and contribute to improving the quality of life of employees and their families, local communities, and the wider community. The concept of CSR involves the responsibility of partnerships between government, companies, and local communities that are active and dynamic (Bocken et al., 2014; Carter & Easton, 2011).

CSR contains positive values on a voluntary basis that are formed humanistly (Hambrick, 1981; Sherman, 2012). Viewed from the standpoint of giving benefits to the companies, CSR is a form of persuasive profitable investment for the future. Forms of CSR activities are not tied to certain criteria. CSR fund distribution is generally carried out at the Company is domiciled (Davis, 2005; Freeman & Hasnaoui 2011; Hidayati, 2011). Although there are no formal rules, the environment around the company is considered the most appropriate to receive CSR benefits given the high level of interaction and the most vulnerable to receiving negative impacts (Detre & Gunderson, 2011) for the existence of the company (Bocken et al., 2014; Detre & Gunderson, 2011).

Implementation of CSR in Indonesia based on the new legislation began in early 2000. PT. Tirta Investama (Aqua Group) has been implementing CSR since the establishment of the company but after legislation regulating Corporate Social Responsibility (CSR) in 2010,

PT. Tirta Investama Cianjur Factory is increasingly active in implementing CSR programs. There are two things behind PT. Tirta Investama implements CSR, including external and internal factors. External factors, namely to get a positive image, good name, and get a place in the heart of the society. This is done so that people know the products from PT. Tirta Investama, which is bottled drinking water with the name Aqua trade products, which ultimately sells the product in the market and to prevent the occurrence of social conflicts that most can disrupt the operational activities of PT. Tirta Investama in the Cianjur Factory area.

Judging from the empirical phenomenon, the benefits of CSR are still not really felt by the people around the Industrial Estate of PT. Tirta Investama. It is caused by various factors, such as non-optimal application of CSR has been done. Forms of activities that have been carried out by PT. Tirta Investama includes; (1) Community empowerment; (2) Economic improvement; (3) Company Social Relations; (4) Good Business Governance; (5) Maintaining Environmental Sustainability.

CSR activities at PT. Tirta Investama refers to three basic principles which include profit, people and planet (Tate et al., 2010) or called the triple bottom line approach (Elkington, 1998), meaning that companies do not only have economic and legal obligations to shareholders, but also obligations to stakeholders. Because companies cannot live, operate, and get profits without the help of other parties. CSR is a corporate decision making linked to ethical values (Freeman & Hasnaoui 2011; Hidayati, 2011; Valor, 2005), in compliance with the rules and decisions of law and uphold the dignity of man, society and the environment (Bocken et al. , 2014; Freeman & Hasnaoui, 2011). However, the final results felt by the society have not been thoroughly beneficial. The initial assumption that researchers can be regarded as an effort that is not optimal CSR activities conducted by PT. Tirta Investama.

Based on the explanation and empirical gap above, this article seeks to analyze the benefits of CSR through a triple bottom line approach at PT. Tirta Investama. Research with research focus of CSR have been carried out, (Bocken et al., 2014; Carter & Easton, 2011; Sherman, 2012) and even the analysis of CSR through approach to the triple bottom line has also been widely studied (Detre & Gunderson, 2011; Elkington, 2004; Norman & MacDonald, 2012; Painter-Morland, 2006; Responsibility & Dixon, 2014; ,ak, 2015), but the research question that arises is whether the implementation of CSR through a triple bottom line approach is carried out by PT. Tirta Investama has been optimal so as to produce great benefits for stakeholders and companies. On the other hand, the problems on the principle of the planet, or the external environment, play an important role in the continued operation of the company in the manufacture of bottled water by PT. Tirta Investama.

Problems that occur when the PT. Tirta Investama ignores the benefits of CSR, is the emergence of threats from various parties such as from the local community, environmental damage that impacts on natural resources as a provider of raw materials (Guillén & Mele, 2006), as well as the company's external social environmental imbalances (Buhmann, 2006). Based on this background, then this article seeks to identify and analyze the extent to which the benefits of CSR PT. Tirta Investama through a triple bottom line approach.

LITERATURE REVIEW

The concept of CSR has evolved over time (Kleine & von Hauff, 2009). In the past CSR was assumed to be a cost that was entirely non-cost recovery (Lu, Chau, Wang, & Pan, 2014; Luu, 2017). Its presence is only a burden because the company seems to be forced to allocate a number of funds that have nothing to do with operational activities. But gradually this paradigm began to shift in line with the strengthening of the concept of value creation in corporate environments (Elkington, 1998).

CSR is a company's concern the activities of the external environment or stakeholders that is based on three basic principles (triple bottom line), with the 3P concept, namely: Profit, People and Planet. The triple bottom line concept was popularized by Elkington (1997) through his book *Cannibals with forks*, the Triple Line of Twentieth Century Business. These

three basic principles are the focus of the company's attention in carrying out CSR in order to produce optimal output and usefulness (Elkington, 2004; Sherman, 2012).

The first basic principle of CSR is profit. Profit is the most important element and is the main goal of every company activity. Profit can be increased through increased productivity and cost efficiency, so that the company has a competitive advantage that can provide maximum value as much as possible (Sherman, 2012). In addition, the company should be responsible to pay attention to what factors are mempengaruhi productivity of the company, and must be capable of social welfare and all its stakeholders. Types of activities: Generosity is carried out sincerely to build community and human resources. Examples of activities such as tuition assistance, assistance to the health sector (Elkington, 1998).

The second is people. People who are important stakeholders in the company, so the company needs to be committed to striving to provide maximum benefits to the people (people). The company must not only have benefits for the organization but must provide economic progress to its stakeholders. The type of activity: the company's actions to go directly into the community to strengthen economic resilience. Examples: fostering SMEs, assisting credit capital, empowering local workers (Elkington, 2004).

The third is planet or environment which is something that is related to all fields of ecology and ecosystems that are bound to the company (Susanto, 2007). The company must be able to use natural resources with great responsibility and maintain environmental conditions and reduce the amount of production waste. Types of activities: implementation of a clean, safe and responsible production process. Examples: waste management, tree planting, environmental campaigns (Elkington, 1998).

CSR is a form of corporate concern based on three basic principles (3P) as described above. Briefly, the principle of the triple bottom line (3P) can be tabulated as follows:

Table 1 – Prinsip Triple Bottom Line

No	CSR concept	Measurement indicator
1.	Profit (Advantage)	Profit becomes a business goal Profit as a driver to work more efficiently Profit is achieved with a standard measure of comparison with other businesses Profit as a tax object
2.	People (Society)	Care for the welfare of the community The company is aware of living in the midst of society The company must be close to the community The community is the source of company life
3.	Planet (Maintaining Nature Conservation)	The company cares about the environment The company cares about biodiversity conservation The company awares of natural resource needs The company awares that it will not damage nature

Source: Buchari Alma (2009).

METHODS OF RESEARCH

The unit of analysis in this research is PT. Tirta Investama which is the Aqua Group branch of Cianjur. The data collection technique used is through the technique of in-depth interviews with relevant informants and key informants to answer research questions. This research uses descriptive qualitative analysis method. The purpose of qualitative analysis is to get the meaning of the relationship of variables so that they can be used to answer the problems formulated in the research (Hair, Money, Samouel, & Page, 2006).

The first process is the first observation to obtain the necessary data such as data relating to CSR carried out at PT. Tirta Investama includes triple bottoms. Furthermore, the data analysis process is carried out with; the first is data reduction is the process of selection, focusing, simplification and abstraction of data (coarse) in the files note regarding the implementation of CSR programs at PT. Tirta Investama Cianjur factory covers the level of profit of the company (profit), community empowerment (people), and environmental preservation (planet). The process continues throughout the research, which is four months.

The second presentation of data is assembling information that allows researchers to draw conclusions narrative description. After the observation and interview process was completed, the researcher then presented data on the implementation of the CSR program at PT. Tirta Investama (Aqua Group) Factory Cianjur include the level of corporate profits (profit), community empowerment (people) and environmental services (planet) so it is easy to analyze. To maintain the validity of the data in this research, researchers used data triangulation technique, which is a technique that utilizes data validity checking something else.

The Third, or the last step in data analysis is drawing conclusions and verification related to the implementation of CSR programs at PT. Tirta Investama (Aqua Group) Cianjur Factory covers the level of company profits (profit), Community empowerment (people), and environmental preservation (planet).

RESULTS AND DISCUSSION

PT. Tirta Investama (Aqua Group) Cianjur Factory was built in 2010 in Gekbrong District, Cianjur Regency. PT. Factory Tirta Investama began operations in mid-2011 by starting to produce drinking water in 600ml bottles, and 19-liter gallons. Regarding CSR activities, PT. Tirta Investama has carried out these social activities starting from the establishment of the factory in 2011. The forms of CSR activities that have been carried out according to the motives for doing CSR at that time.

After conducting deep interviews with related parties who later became informants in this study, the analysis will be carried out according to the method references in this study. The next discussion is about the benefits felt by CSR beneficiary stakeholders based on the triple bottom line, which includes the level of corporate profits (profit), Community empowerment (people) and environmental conservation (planet).

The company remains to be oriented to seek economic advantage that allows it to continue to operate and expand. Profit is the most important element and is the main goal of every business activity. As stated by Jhon Elkington (1997) that companies should not only have benefits for their organizations but must provide economic progress to their stakeholders. The types of CSR activities in profit include the company's actions to go directly into the community to strengthen economic resilience, such as fostering SMEs, assisting credit capital, empowering local workers.

PT. Tirta Investama (Aqua Group) Cianjur Factory realizes the importance of maintaining the growth of company performance so that the business that is carried out continues on an ongoing basis. One of the things that must be maintained properly is the high trust of customers, which the products and services chosen provide tangible and valuable benefits to be obtained. Therefore, PT. Tirta Investama (Aqua Group) Cianjur Factory always strives to maintain customer trust in the quality of products sold and provide the best service. PT. Tirta Investama (Aqua Group) Cianjur Factory maintains product quality through the application of an ISO 9001: 2008 international standardized quality management system that is consistently applied. PT. Tirta Investama (Aqua Group) Cianjur Factory always opens opportunities for independent surveyors to carry out periodic checks on commitments in the implementation of production systems and the consistency of product quality quality according to the required standards.

In addition to maintaining products and resolving every customer complaint that comes in, PT. Tirta Investama (Aqua Group) Cianjur factory seeks to maintain the product image and guarantee the availability of products on the market, through the implementation of various forms of marketing communication. The purpose is to strengthen the position of products and brands in the market and maintain customer loyalty (Diugwu, 2011). PT. Tirta Investama (Aqua Group) Cianjur Factory has allocated a portion of its profits to CSR costs, where the amount of the cost has always increased, which amounted to 2.3 billion in 2016 and increased to 4.2 billion in 2017.

The profit itself is essentially an additional income that can be used to guarantee the survival of the company. While the activities that can be taken to boost profits include

increasing productivity and making cost efficiency, so that the company has a competitive advantage that can provide added value as much as possible. The link between profit and CSR is when a company makes a profit, it is not solely because the company is there, but there are other parties who help, namely stakeholders. Therefore the company should share the profits with its stakeholders in various forms. This is where the essence of profit in the triple bottom line, because above the profits obtained by the company there are rights of other parties who are entitled also for the profits.

The company must have concern for human welfare. Some CSR programs are often developed by companies such as: scholarships for students in the environment surrounding the company, the establishment of education and health facilities, strengthening local economic capacities and so forth. Elkington (1997) reveals that a business must be responsible for advancing and social welfare and all its stakeholders. Some types of CSR activities in people include generosity done sincerely to build society and human resources, such as education, health costs.

The order of society is not spared from the view of CSR, through its assistance formed the Village Community Development Institution (LPMK), as the institution that manages the program and is responsible for programs in the village. With the existence of LPMK, the community is supported in managing the program, especially the ability to manage the organization. The initial stage after the opening LPMK in Cianjur, has also made the introduction of entrepreneurship and manufacture AD / ART. It's very useful for the people who in their lives also need to organize.

The village head of Gekbrong said that PT. Tirta Investama (Aqua Group) Cianjur Factory provides clean water assistance to residents of Gekbrong Village and Babakan Village and also toilets in Majelis Taklim, Kampung Babakan. Hopefully the community can take care of it and hopefully the company is still willing to help in other areas.

The village head of Kebon Peteuy said that PT. Tirta Investama has provided SAB and toilets in the Darul Anwar Islamic Boarding School who was in our village postscript as institutions that educate the younger generation, but has lacked the facilities at this time has been completed and is already in use may be useful and blessings. Hopefully next year the company will still provide assistance to our citizens who are still experiencing shortages of clean water.

The village head Songgom said PT. Tirta Investama (Aqua Group) Cianjur Factory has facilitated residents to access clean water in Pancuran Luhur village through connecting clean water from PAM Bumdes, hopefully in the future cooperation can be improved in handling the difficulties of community clean water together with the bumdes water company managed by CV. Barokah. Currently there are 25 houses installed and can be utilized, hopefully with clean water facilities this can improve the quality of public health.

The following are some of the community empowerment activities that have been carried out by PT. Tirta Investama (Aqua Group) Pabrik Cianjur namely:

Integrated Farming System (IFS) Program. Agriculture has become a local context as well as the local wisdom of the people in Gekbrong Village which is also the location of the establishment of the Cianjur AQUA factory. The AQUA Cianjur factory is in an area surrounded by community agricultural fields both rice farming and horticultural agriculture. It's just that most of the agricultural fields are managed by the community around the plant in an environmentally unfriendly manner. One of them still uses chemical pesticides as the foundation of farmers in caring for their agricultural crops from pest attacks.

The use of chemical pesticides is certainly very dangerous not only for the health of farmers, but will also bring a negative domino effect to the environment, including a threat to Aqua water sources. The threat of contamination of Aqua water sources from pesticides and chemical fertilizers can have a fatal impact on the sustainability of Aqua's business. IFS program based on environment-friendly agriculture is expected to have an impact on improvement of economic and social aspects as well as environmental preservation. Increased economic aspects are derived from the existence of added value of environmentally friendly agricultural products, where consumers are aware of products from Eco-friendly agricultural products willing to provide more prices.

Healthy and Organic Rice Agriculture. The IFS Program activities have led to the birth of the Cianjur Organic Farmers Association in 2011 as a local institution that guides farmers in the practice and development of environmentally friendly agriculture. This year's IFS will continue to strengthen the achievements of the previous program with a focus on revitalizing Hipoci agricultural land. The IFS program will ensure that the implementation of environmentally friendly agricultural practices can be achieved sustainably from the aspect of production to post-harvest and is integrated with the HIPOCI business unit, the HIPOCI Bisnis Center.

Collaboration with Hipoci Business Center. IFS collaboration with the Hipoci Business Center works well. HIPOCI go organic rice supply for HBC is part of the collaboration of upstream downstream activities. Hipoci focused on preparing go organic rice products while HBC was tasked with marketing Hipoci rice products under the Orisa brand. Hipoci has absorbed wet grain from members for the period October 2017. November 2017 reached 4,022 kg, 2,261 Kg in the period October 2017 and 1,716 Kg for the period of November 2017. Hipoci then carried out postharvest activities ranging from drying, grinding, and sorting to packaging. The rice products are then sold to the AHS Distributor with the name Orisa rice product. The total Purchase Order (PO) of Orisa rice to HIPOCI in the last 2 months reached 7,050 kg. The real contribution of CSR AQUA for the community is carried out through several programs. CSR AQUA contributes to public health through the Water Access, Sanitation and Hygiene (WASH) program. By running the WASH program, AQUA believes that every individual has the right to access clean water to form a healthy generation so that they have a better national competitiveness.

Company concerned about the environment and sustainability of biodiversity. Jhon Elkington (1997) cited by Hasibuan and Sedyono (2006: 73) states that companies must be able to use natural resources very responsibly and maintain environmental conditions and minimize the amount of production waste. The types of activities include the application of clean, safe and responsible production processes, such as waste management, tree planting, environmental campaigns. Some CSR programs that are based on this principle are usually in the form of greening the environment, providing clean water facilities, improving settlements, developing tourism (ecotourism) and so on. The following are some of the environmental conservation (planet) activities that have been carried out by PT. Tirta Investama (Aqua Group) Pabrik Cianjur namely:

Taman Kehati. Taman Kehati program is one of the conservation programs carried out in the park area of the AQUA Cianjur factory. Kehati Park is a reserve area of local biological natural resources outside the forest area that has in situ and / or ex situ conservation functions, especially for plants that pollinate and / or seed dispersion must be assisted by animals with the structure and composition of their vegetation to support the sustainability of pollinating animals and seed dispersers (Permen LH No.3 tahun 2012).

The purpose of the Kehati Park program is to save various species of native / local plants that have a very high level of threat to their sustainability and with the vegetation structure supporting the sustainability of various species of animals whose lives depend and influence the vegetation.

PT. Tirta Investama (Aqua Group) Cianjur Factory has designed the Taman Kehati program for a period of 5 years (2016 to 2020). The first phase was carried out in 2016. In 2017 the Kehati Cianjur Park project began in May and this is the second year as the Road Map has been prepared in the grand design book. In 2017 Aqua Cianjur conducted the Taman Kehati program continuing the program the previous year with the main activity of planting fruit trees and endemic species in the Kehati Park Cianjur Zone II Plant as many as 220 trees.

Conservation Program Towards Sustainable Cianjur. Forest and land conservation are basically based on the importance of forests and land as a place to live biodiversity in them, as well as regulating water systems and soil fertility that have high value for human life. The purpose of the conservation program towards Cianjur Lestari is an effort to rehabilitate forests and land by planting trees in the conservation area of Taman Nasional Gunung Gede

Pangrango (TNGGP) and Citarum-Cibeleung watershed / Sub-watershed area in Tabrik Village, Gekbrong Village.

Conservation Taman Nasional Gunung Gede Pangrango (TNGGP). Conservation Program TNGGP 2017 as an integral part of the project Partnership Agreements between the Directorate General of Forest Protection and Nature Conservation (DG PHKA) and Directorate-General of Watershed Management and Forest Protection (DG BPDASHL) in 2014 until 2019 through the Biodiversity Conservation-based Community Empowerment Around Conservation Areas. Program Achievements the implementation of the program began with the formation of a conservation group as the main subject for the implementation of the program called the Hejo Cipruk Forest Farmer Group (KTH) consisting of 25 farmers. This is in line with the principle of a community empowerment based program. The implementation of tree planting is the main activity of this conservation program that has been carried out in the Cadas Hanging block and Bedeng block, precisely in the village of Tabrik, Gekbrong Village, Gekbrong District with 3,500 trees.

Cibeleung Sub-watershed Conservation. As a form of company concern for environmental improvement and supporting the save global warming campaign, PT Tirta Investama Cianjur (Aqua Cianjur) implements various environmental improvement programs, especially in the upstream and middle section, one of which is through the Cibeleung Sub-watershed Conservation Program in 2017. Expected the existence of this program can answer various problems faced by Cibeleung Sub-watershed, including pollution of waste, pollution of chemical pesticides, the conversion of riverbanks and lack of perennials around the river. These problems if they don't get immediate treatment can be a threat to the sustainability of the Cibeleung River in the future. Through this program, involving the community is expected to reduce Cibeleung sub-watershed problems.

Water Access, Sanitation and Hygiene (WASH) Program. As a form of commitment to the community and also to support the government's program target to achieve 100% Universal Access by 2020, AQUA contributes to improving access to clean water for the community by running a Water Access, Sanitation and Hygiene (WASH) program / Access to Clean Water and Environmental Health. . By running the WASH program, AQUA believes that every individual has the right to access clean water to form a healthy generation so that they have a better national competitiveness. Commitment to contribute to the achievement of the Universal Access is also in line with the double commitment of Danone (dual commitment) is to ensure the sustainability of the business and contribute to social and environmental progress.

WASH program run by AQUA Factory Cianjur based on results of social and environmental mapping, and analysis of community needs related to the level of access to clean water and sanitation, especially in Cianjur area. Program planning is carried out in a participatory manner by involving the community and other stakeholders, to foster ownership so that they can play more roles and have responsibility in managing and maintaining clean water installation systems, starting from machinery, electricity and piping systems so that benefits can continue felt on an ongoing basis. The program began in 2013 until 2017 and has provided more than 120 points of location for clean water facilities (SAB).

Development of Clean Water Facilities. One of the problems faced by the community water supply is low access to clean water supply. There are several areas around Cianjur's AQUA factory which still have to walk far to access clean water sources because the wells they have experience drought, especially during the dry season. The low access to clean water from the community has been well responded by AQUA Cianjur through the implementation of CSR programs in the form of the WASH program.

Community Based Total Sanitation. Community-based Total Sanitation, hereinafter referred to as CBTS, is an approach to change the behavior of hygiene and sanitation through community empowerment using the triggering method. CBTS activities are an important part that cannot be separated from the WASH program. CBTS activities are synergized with the work program of the Health Office and Gekbrong Health Center as implementing partners to build awareness of the importance of clean living, sanitation and environmental health in the society.

The CBTS activities began with the formation of health cadres from representatives of each of the established SABs who came from Gekbrong Village, Kebonpeuteuy Village and Songgom Village and with a total of 14 people. The role of health workers is very important as well as the driving spearhead CBTS activities in the community to continuously undone CBTS promotion and sustainable. Seeing so much the role of health workers as an arm CBTS in society, the health cadres is also equipped with a variety of capacity building activities. Among them are training for Trainer (TOT) training for health cadres with facilitators from the Gekbrong District Health Center.

CONCLUSION

The application of CSR relates to the level of profit of the company of PT. Tirta Investama (Aqua Group) Cianjur Factory contributes to the economic activities of the local community through the Integrated Farming System (IFS) Program. IFS program based on environment-friendly agriculture is expected to have an impact on improvement of economic and social aspects as well as environmental preservation. Increased economic aspects are derived from the existence of added value of environmentally friendly agricultural products, where consumers are aware of products from Eco-friendly agricultural products willing to provide more prices.

The implementation of CSR related to community empowerment (people) is actually implemented by PT. Tirta Investama (Aqua Group) Cianjur Factory in the form of Integrated Farming System (IFS) Program, Healthy and Organic Rice Agriculture, and Collaboration with Hipoci Business Center. The implementation of CSR is related to environmental preservation (plannet) of PT. Tirta Investama (Aqua Group) Cianjur Factory can be seen from environmental CSR programs that are actually carried out to save and preserve the environment.

From the CSR activities of PT. Tirta Investama is based on the form of activities carried out with the triple bottom line approach, there is still public awareness of business sustainability. Preferably the companies make their CSR program orientation, where such programs are not only aimed at building social facilities, providing assistance or physical infrastructure for communities around the area of the company, but rather aimed at broader community education on CSR issues and their impact. This is needed to increase public awareness about the importance of the results that can be achieved through CSR programs of this kind, so that public awareness will be formed.

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PROFIT ANALYSIS OF CABBAGE FARM MANAGEMENT IN MALANG, INDONESIA

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ABSTRACT

The successful agribusiness is based on farmer competency and their ability to make farming decisions. This research aims to understand: the characteristic of cabbage farmer; the revenue analysis and feasibility study of cabbage farming; the obstacles and the risks which are encountered by the farmer. Malang was chosen deliberately as the research location considering it as the centre of cabbage production. This research used a probability sampling, with 24 samples of respondent drew by a simple random sampling. Result shows that the majority of respondent are between 30-49 years old and most of them are elementary school graduates. Most farmers have worked on their farming for more than 20-30 years. Some of respondent has wide area of cabbage farming from 1-2 ha, that makes the farming profits obtained was Rp. 22,488,325. Result shows that RC Ratio were 2,16, BEP price is Rp. 1.174,39, and BEP unit is 2.811,19 kg. It can be concluded that cabbage farming was done during that season was highly feasible.

KEY WORDS

Profit analysis, risk, cabbage farming.

The success of farm management activities is highly dependent on the competency of farmers as the main manager. The competency of farmers is not the same as the others, it really depends on the characteristics they have. There are many factors that relate to farmers who improve them in increasing the quantity and quality of their products. These factors are age, education level, farming experience, family size, cropping pattern, and land ownership. Age factor becomes one that is not important in the characteristics of farmers in terms of increasing the number of farmers, will further enhance the experience in farming, this will further improve the competency of farmers in obtaining farms (Mulyasa, 2003).

Education greatly determines the level of competency of farmers in conducting farm management. This is because basically education describes the level of ability and level of understanding of farmers regarding everything, both increasing knowledge, skills, and changing attitudes of farmers. In addition, the factor of land area cultivated by farmers is very closely related to farmers' income. Lionberger in Andawan (2007) explained that the wider the land controlled by farmers, usually farmers has a quick attitude to adopt innovation because they have better economic capabilities.

Farm Management experience plays an important role in increasing farmers' competencies. Experience is education that is obtained by someone in the routine of daily life, such as events or realities that they experience. The purpose of this study of cabbage farm management in Malang can be divided as follows: (1) To find out the characteristics of cabbage farmers in Malang, (2) can analyze cabbage farming income in Malang, (3) To find out the feasibility analysis of cabbage farming in Malang, (4) understanding the obstacles and risks faced by cabbage farmers in Malang.

LITERATURE REVIEW

According to Darmawi (2004) risk can be defined into several meanings, such as risk as a possibility of loss, risk which is uncertainty, risk is the spread of actual results from expected results and risk as the probability of an outcome different from the expected results. Farming activities carried out by farmers are always faced with situations of risk and

uncertainty where the size of the risk experienced by a farmer depends on the courage to make a decision (Rodjak, 2002).

Facing the risk, cabbage farmers can behave bravely, neutral and reluctant to risk (Kadarsan, 1995). Basically, no farmer dares to take risks without expecting greater results. According to Soekartawi et al (1993), farmer's behavior towards risk depends on the attitudes and behavior of individuals who are also influenced by the environment. Socio-economic factors such as age, education and farming experience and other social factors can influence farmers' behaviors in facing risks.

Based on the results of Aini's (2015) research conducted, it can be concluded that the productivity and income of cabbage farming in rainfed lowland areas is greater than the productivity and income of cabbage farming on dry land. The risk of cabbage farming on dry land is greater than the risk in rainfed lowland, where the risk of cabbage farming is caused by weather and pest disease. On dry land 93.18 percent of farmers behave in a neutral manner and 6.82 percent behave reluctantly on risk, whereas in rainfed lowland areas 41.94 percent farmers behave in a neutral manner and 58.06 percent of farmers behave reluctantly to risk, and not found by farmers who behave bravely towards risk on dry land and in rainfed lowland areas. Farmer's behavior towards the risk of cabbage farming in dry land and rainfed lowland is influenced by farm income, land area, farmer's age, number of family dependents, and type of land.

METHODS OF RESEARCH

This research was conducted in June-December 2018 in Malang. The research location was chosen intentionally, based on the consideration that it was one of the regency in East Java which was the center of cabbage production.

The sampling technique used is probability sampling with a simple random side method. The sample used amounted to 24 research respondents. The type of data used in this study is primary data obtained through interviews with cabbage farmers.

Data analysis is carried out quantitatively for income and profit analysis, while qualitatively descriptive used frequency tables for risk analysis and farmer perceptions.

RESULTS AND DISCUSSION

Characteristics of cabbage farmers studied included age, education level, main and side jobs, number of families, length of cultivation, and land ownership can be seen in Tables 1-8:

Table 1 – Characteristics of Respondents Based on Age Level

Category	Age (Year)	Quantity (persons)	Percentage (%)
Young	30 - 49	13	52
Average	50 - 69	11	44
Old	70 - 89	1	4
Number		24	100

Source: Primary Data (processed), 2018.

Based on Table 1 shows that the highest number of respondents is in the young category, 30 - 49 years, as many as 13 persons with a percentage of 52%. This can affect the level of productivity of cabbage, apart from the physical young farmers who are far better than the old farmers; young farmers also tend to have more curiosity and enthusiasm to develop their farm management with adoption and new technological innovations. This is in accordance with Arlis (2016) statement, that farmers who are easily aged have a stronger physical and high enthusiasm to work, and also a statement by Soekartawi (2002), that the younger age farmers usually have the enthusiasm to want to know what they have not know, so that they are trying to more quickly adopt an innovation, even though they are not experienced in the matter of adopting the innovation.

Table 2 – Characteristic of Respondents Based on Education Level

Education Level	Quantity (Persons)	Percentage (%)
Elementary School	14	58
Junior High School	4	17
Senior High School	6	25
Total	24	100

Source: Primary Data (processed), 2018.

Table 2 shows that the highest number of respondents had an elementary school education level of 14 persons with a percentage of 58%. The level of education influences farmers' decisions both in farm management and daily life. If the farmer's education level is low, it will influence farmers' decisions in adopting new technologies that can increase farmers' income. This is in accordance with the statement of Mardikanto (2009) that education is the process of developing one's knowledge and attitudes that are carried out in a planned manner, which will form an insight into an object that will eventually lead to decision making.

Table 3 – Characteristic of Respondents Based on Main Occupation

Main Occupation	Quantity (Persons)	Percentage (%)
Farmer	23	96
Land owner	1	4
Total	24	100

Source: Primary Data (processed by Researcher), 2018.

Table 4 – Characteristic of Respondents Based on Side Occupation

Side Job	Quantity (persons)	Percentage(%)
Farmer with no side job	13	54
Seller	7	30
Entrepreneur	1	4
Security	1	4
Gardener	1	4
Farmer	1	4
Number	24	100

Source: Primary Data (processed by Researcher), 2018.

Based on Table 3 and Table 4, it can be seen that most of the respondents made farmers as their main jobs are 23 persons with a percentage of 96%. Even though the work on the farm does not require farmers to be on their farm every day, as Dewi (2018) stated, farmers can use their free time by working in other sectors if they still want to increase income, most respondents are 13 persons with 54% not have side jobs and as many as 11 people or 46% have side jobs outside the agricultural sector.

Table 5 shows that the number of families of respondents consisted of 2 to more than 6 people. More and more families can also benefit losses. The advantage is because it has more amount of energy to help farm management, but as a loss because there will be more family expenses. This is in accordance with the statement of Shamsiah (2002), that the higher the family burden, the higher the production that needs to be produced to meet family needs in order to achieve prosperity and the more family members, the greater the opportunity for family members to assist in farm management activities to reduce labour costs.

Table 5 – Characteristic of Respondents Based on Family Members

Family Members	Quantity (Persons)	Percentage (%)
2 – 4 persons	13	54
5 – 6 persons	9	38
> 6 persons	2	8
Number	24	100

Source: Primary Data (processed), 2018.

Table 6 – Characteristic of Respondents Based on Farming Management Length

Farming Management Length	Quantity (persons)	Percentage (%)
0 – 30 years	4	17
31 years	19	79
40 years	1	4
Number	24	100

Source: Primary Data (processed), 2018.

The characteristics of farmers regarding the duration of farm management are shown in Table 6, most of the respondents had experience of 31 years as many as 19 persons, while those with longer experience were only 1 person, other respondents had less than 30 years of experience. Seeing from the farming experience carried out by 24 respondents, it can be said that the experience is quite good and long in farming the farmers are able to obtain knowledge that is not learned in school (Arlis, 2016).

Table 7 – Characteristic of Respondents Based on Cropping System

Planting System	Quantity (persons)	Percentage (%)
Monoculture	18	75
Polyculture	5	21
Cropping Rotation	1	4
Number	24	100

Source: Primary Data (processed), 2018.

Table 7 shows the planting system used by respondents. Based on the results of interviews there are 3 types, namely monoculture, polyculture, and cropping rotation. The majority of respondents used a monoculture planting system that is as many as 18 people with a percentage of 75%. The monoculture planting system on cabbage commodities has a spacing of 30 x 75 cm. The monoculture cropping system is considered more effective because it facilitates maintenance of commodities that are planted and only plants one type of crop, so the treatment will be more intensive. In addition, according to Anwar (2012), the monoculture cropping pattern received by plants will be more optimally utilized compared to the polyculture cropping pattern. Thus, the monoculture planting pattern is considered to be in accordance with the cropping pattern on cabbage commodities.

Table 8 – Characteristic of Respondents Based on Land Usage

Farming Management Length	Quantity (persons)	Percentage (%)
One's own	14	58
Hiring	6	25
One's own and Hiring	4	17
Number	24	100

Source: Primary Data (processed), 2018.

Table 8 shows that respondents use more of their own land as many as 14 people with a percentage of 58%. Based on the results of interviews in the field, it is known that the average area of land used by farmers is 0.75 Ha. The land area is included in the medium category (Soekartawi, 2002). Then, respondent farmers are grouped in medium farmers, this is in accordance with the statement of Sastraatmadja (2010), that small farmers are farmers who have 0.50 up to 1 hectare land.

The purpose of doing farming is to get the maximum revenue by reducing expenditure so that farmers will get high net income. In this study, the average land area of 0.75 Ha was able to produce cabbage of 8,876 Kg with an average selling price of Rp. 3,708. Details of receipts, costs, and profits of cabbage farm management can be seen in table 9.

Table 9 shows that cabbage farm management in Malang takes profit because it has a higher value than the total cost. The total profit or average income of cabbage farm management for the average land area of 0,75 ha is Rp. 22,488,325.

Table 9 – Revenue, Cost, Cabbage Farm Management Profit in Malang

No.	Description	Average
1.	Revenue	Rp 32,912,208
2.	Hiring Cost	Rp 1,877,556
3.	Deprecation Cost	Rp 342,783
4.	Seed Cost	Rp 1,539,083
5.	Fertilizer Cost	Rp 3,020,940
6.	Medicine Cost	Rp 1,130,786
7.	Labor Cost	Rp 2,512,735
Cost Total		Rp 10,423,883
Profit		Rp 22,488,325

Source: Primary Data (processed), 2018.

Farming feasibility can be calculated using the ratio of revenue to costs or R / C ratio. Based on the results of the study, obtained the feasibility level of cabbage farm management as follows:

$$R/C = TR/TC == 2.16$$

It means the ratio between total revenue and the total cost obtained is 2.16. This shows that the cabbage farm management that is run can be said to be feasible because it has an RC Ratio of more than 1, where each farmer issues an input of Rp. 1 will get revenue of Rp. 2.16.

In addition to carrying out RC Ratio analysis, to find out whether the farm management is feasible or not, it can be calculated by the break-even point or BEP of the business being carried out. Based on the results of the study, BEP calculation results are obtained as follows:

$$BEP_{harga} = TC/Q = Rp 1.174,39$$

$$BEP_{unit} = TC/p = 2,811.19 \text{ Kg}$$

$$BEP_{revenue} = BEP_{price} \times BEP_{unit} = Rp 3,301,429.57$$

Based on the results of calculations, it can be seen that if cabbage farm management breaks even should be sold at a price of IDR 1,174.39 with a quantity of 2,811.19 Kg. When compared with the average number of cabbage sold and the price used, the cabbage farming that is run can be said to be feasible because it has broken even or is able to return the initial capital. The actual receipt obtained by the farmer, which is Rp. 32,912,208, has passed the break-even point or BEP of receipt, so that the farming run can be considered feasible.

When carrying out cabbage farm management activities, it is certainly inseparable from various obstacles that will be faced by farmers. Cabbage farmers in Malang mentioned a number of obstacles faced, namely pest attacks (Plant Pest Organisms), fluctuating prices, capital, and climate. Climate change and climate variability have an impact in the form of fluctuations in temperature and humidity that can increase the growth and development of pests.

Capital has a significant impact on financing agricultural production. In addition to capital, the lack of capital is accompanied by the low quality of farmers' human resources, which include low levels of education, skills, and mastery of technology, weak motivation to develop and defend their rights, and lack of leadership among the farmers themselves (Sesbany, 2011).

The risk experienced by farmers is divided into 5 namely, production risk, market risk or price, institutional risk, financial risk, and human risk. The production risks experienced by respondents were attacks on pests, climate and natural disasters. This is in accordance with

the opinion of Harwood, et al (1999) in Rio Saputra (2017) that the risk of production in agriculture can be caused due to uncontrolled events. Usually caused by extreme natural conditions such as rainfall, climate, weather, and attacks of pests and diseases. The biggest production risk experienced by farmers is pest attack which is as many as 15 people or 56%.

Market risk or price faced by farmers is divided into three, namely, fluctuating selling prices of cabbage, reduced demand, and expensive input prices. The risk most faced by farmers is the selling price of a fluent cabbage of 17 people or by 47%. Fluctuating prices are felt by farmers because farmers do not have market price certainty regarding the selling price of products. This is in accordance with the opinion of Harwood, et al (1999) in Saputra (2017) that price risk can be influenced by changes in the selling price of products that will always fluctuate. In addition, fluctuations in input prices and agricultural output can affect production costs. Institutional risks experienced by farmers are lack of agricultural counseling, government policies that do not favor farmers or small people, and the slow development or facilitation of agriculture such as irrigation, roads and warehouses. The most risk faced by farmers was the absence of 11 agricultural extension agents who provided counseling in related villages.

According to Harwood et al (1999) in Saputra (2017), institutions or institutions affect agricultural products through counseling, policies and regulations. The presence of extension agents has a big influence on farmers' knowledge of policies, programs and incentives provided by the government related to farm management activities carried out by farmers. Financial risk on cabbage farming experienced by farmers is a lack of farming capital, lack of cooperatives, and large household expenditure. Harwood et al (1999) in Saputra (2017) states that financial risk is an impact caused by the way farmers manage their finances. The most common risk faced by the respondent farmers is the lack of social capital as many as 13 people. Owned capital can be used optimally to produce output. Many capital loans made by farmers provide balanced benefits in the form of profits between managers and capital owners.

Human risk that can be experienced by cabbage farmers is damage to equipment due to continuous use, loss of equipment due to being stolen or affected by fire, and the health of farmers who are disturbed. The biggest risk faced by farmers is damage to production equipment and loss of equipment due to being stolen or burned, each numbering 9 people. This risk is caused by human behavior in carrying out the production process. Human resources need to be considered to produce optimal output. Human activities such as negligence can cause losses such as negligence which results in fire, theft and damage to production facilities (Harwood, et al (1999) in Saputra (2017)).

The overall risks of production, markets, institutions, finance and people have different proportions for cabbage farmers. the risk most faced by farmers is the risk that comes from activities originating from the market while the least risk faced by farmers is the risk that comes from the institution. Market risk related to fluctuating selling prices in the market or fluctuating is the most problem because Cabbage is a highly volatile agricultural commodity in terms of production and prices at the farm level. Cabbage production can be abundant at one time so the price becomes very cheap. Meanwhile, farmers' concerns about the risks of farm management at other times lead to reduced production, which increases prices (Food Crop Agriculture Service, 2007).

According to respondent, the risks most often faced are all things that can cause losses to vegetable farm management and the consequences that become a burden on farmers if they do vegetable farming, such as input, output, production facilities, and so on. According to Abdurrahman (2009) opinion that the risk of cabbage farming is quite high both from the attack of plant pests and fluctuating prices. This shows that in conducting cabbage farming, farmers consider that pest attacks, price problems and others are consequences that must be borne by farmers.

The most common failure in cabbage farming is the damage to vegetables due to pests and diseases as many as 17 perceptions. This is consistent with Naylor's statement in Abdurrahman (2009) that seasonal crops with horticulture types have a greater risk of failure due to the growth and development of pests and diseases of plant / pest organisms (OPT).

The level of productivity risk in this study is divided into three, namely less than 20%, 20% - 65%, and more than 65%. According to farmers' perceptions, at most the level of risk faced by farmers is greater than 65%, with 14 perceptions. Then, farmers' perceptions of uneven land risk also show that farmers can still tolerate land irregularities by taking various precautions.

The way farmers deal with risk is divided into three, namely, before the occurrence of risk, when the risk occurs during the production period, and after experiencing risks. Before the risk occurred, farmers made more preparations for all supporting factors for cabbage farm management production such as land management and irrigation. When there is a risk in the production period, the most that farmers do is to control pests using pesticides, while the other way is to use fertilizer. The use of pesticides is an option if other methods of control have been tried and do not reveal satisfactory results and can be done if the pest population has reached the economic threshold (Hanindipto, 2008).

When the risk has occurred, the way farmers handle it the most is to continue farm management until the harvest period even though vegetable production is not as expected, while the least method is done by finding a solution by asking the local agriculture instructor about how to deal with the risks. From the overall way farmers deal with risk, most farmers deal with risks at the time of risk. This is because farmers experience a lack of capital in minimizing the risk that might arise. In accordance with Saptana's opinion (2011), that if the farmer's income is large enough, they can carry out various strategies to reduce the risks they face and conversely the limitations of farmers such as capital can be an obstacle for farmers to reduce risk.

CONCLUSION

Cabbage farmer done during the time of the research in Malang considered as highly feasible. It can be seen from the result from total cost of Rp. 10,423,833 with total revenues of Rp. 32,912,208. The profits obtained are Rp. 22,488,325. Cabbage farm management is feasible because it has an R/C ratio of 2.16, and is sold at a price that exceeds the BEP price Rp. 1,174.39. Moreover, the quantity that is produced by farmers are exceeds the BEP unit (2,811.19 Kg). The successful of the business was related mostly of the farmer experiences. Although they are between 31-60 years old and elementary school graduates, they are already within the business for more than 30 years. They also have stable area for farming and focusing on cabbage around 0,75 to more than 1 ha. However, cabbage farmer has some constraints, such as plant diseases and pest, fluctuating price, and climate. Most cabbage farmers spraying pesticides to eradicate pests and diseases. In this way, the highly successful business still not yet consider safety environment as important factor to sustainable agriculture.

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CORRELATION OF SELF-CONTROL AND BULLYING TENDENCIES OF NURSES

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ABSTRACT

For a nurse, caring for patients is a job that not only requires the ability to care for but also good relations between nurses and patients in order to assist patients in overcoming illness. However, patients occasionally require attention or care from a nurse while the patient's complaint and the limited number of nurses can make nurses lose self-control to allow the occurrence of verbal aggressive action to harm another or bullying. Therefore, this study aims to determine the correlation of self-control and bullying tendencies of nurses. Bullying is a deliberate act of aggression with the intent to cause physical or psychological suffering on another individual. Self-control is an integrative individual conducted to its environment. Based on the description above, the study examined how self-control related to bullying tendencies to nurses. A total of 83 participants, the nurses who served in the basic ward. The sampling technique using saturated sampling technique in which all members of the population is used as a sample. The data was collected using survey method by Bullying scale consisting of 32 items and Self-Control scale consists of 40 items. Based on data analysis using Pearson Product Moment the results obtained are there is a correlation between self-control and bullying tendencies on nurses. Therefore, then the higher the self-control, the lower the tendency of bullying.

KEY WORDS

Self control, bullying, nurse, public service.

Nurses have an important subject in providing health services for caregivers are available 24 hours a day to treat and protect patients. The services provided reach the highest level of health in accordance with their potential in promoting, preventive, curative, and rehabilitative using the nursing process (Effendy, 1995).

Caring is basically a reciprocal and dynamic relationships between nurses and patients. Fawcett (in Abraham, 1997), considers that patients' understanding of the social environment is important for health status, and states that the nurse-patient relationship are the primary determinant of the effectiveness of nursing interventions. Stockwell (in Abraham, 1997) reports that unpopular patients tend to complain, implying that these patients suffer more than nurses think and have conditions believed by nurses to be better treated elsewhere. This is caused by patients or relatives of patients who are sometimes demand patient rights (e.g., better service) in a bad way. This happens because the patient is in a depressed position and must be helped. This makes the patient or patient's family may lose control if the request is not immediately fulfilled.

If this continues, the nurse is pressured by patient or the patient's family can respond verbally. This retaliation which can be seen as verbal abuse can occur because the nurse has run out of energy. This situation can be seen as negligent in providing good care for the patient, or rejecting information that is critical of patients. Vickers (2004) calls actions by the nurse as bullying behavior. Vickers (2004) in his research said that there was a complex form of bullying behavior by several nurses in a hospital system where the object of bullying is another nurse.

Aside from being addressed to patients, bullying carried out by nurses can also be directed to other nursing colleagues. A bully intends to urge a target or the desire continuously and make the workplace environment unacceptable. The increasing pressure of bullies on the other hand lowers control of the situation of bullies. Bully's pressure can cause

an individual who is an object forced to work harder to improve what the nurse has done to bully, hide some of mistakes made by the patient, and correct mistakes that may have occurred.

Vickers (2004) states that in a study conducted it was found that nurse bullying can occur in several ways, the list of bully's names in one work shift to disturb victims, regulate tasks and refuse information, harass and bully patients to suppress nurses who are indirect target of bullies, protect and hide each other, and to bestow mistakes on nurses who are subjected to bullying so that they become helpless. Workplace bullying can cause the loss of nurse's skills and lead to lower nurse morale and productivity, allowing nurses to decide to stop working.

But each individual has a mechanism that can help organize and guide behavior, as self-control. Self-control is behavior that can help individuals to maintain an excessive emotional response in order to remain stable or normal, helping individuals to open themselves without emotions so that individuals have a healthy emotional life (Messina, 2007). According to Calhoun and Acocellah (1990), self-control is a process of managing one's physical, psychological, and behavior. Meanwhile, Goldfried and Merbaum (in Lazarus, 1976) defines self-control as the ability to organize and direct forms of behavior through cognitive considerations so that it can lead to positive consequence.

Therefore, self-control becomes an important issue to be discussed because of the self-control; individuals accept responsibility for all actions and thoughts, in the relationship of individuals to their environment and provide the power to accept all the consequences (Messina, 2007:2). Self-control of one individual is different from the other. There are individuals who have good self-control and there are individuals who have poor self-control. Individuals who have good self-control can change events and become the main agents in directing and managing key behaviors that have positive consequences. Nurses who have self-control will be able to organize their stimuli and behavior so that they can minimize unwanted consequences when caring for patients.

Individuals with good self-control very concerned about the right ways to behave in various situations. Individuals tend to change their behavior according to the demands of social situations which can then adjust the impression created. Their behavior is more responsive, more flexible, trying to facilitate social interactions, being warm and open (Roosianti, in Zulkarnain, 2002). While individuals who have poor self-control are unable to direct and organize their behavior, so that they can be assumed to not work properly.

Self-control is considered a valuable skill, because in self-control, individual who set their own performance standards and will appreciate or punish themselves if they succeed or fail to achieve this standard. In external control, then the other people set standards and give reward or punishment (Calhoun and Acocella, 1990).

The discussion above shows how bullying behavior can occur to individuals while reducing self-control. Based on the description above, the authors are interested in seeing more about the relationship of self control and bullying tendencies of nurses.

LITERATURE REVIEW

If an individual or group of individuals tries to influence other individual or other groups, the way can vary either through words or actions. Repeated aggressive actions can create continuous pressure to make the victim helpless. This situation makes bullies treat victims of bullying to a certain extent so that it seems to be mastering it. Bullying (Randall, 1996) is "the aggressive behavior arising from the deliberate intent to cause physical or psychological distress to others." According to Sheras (2002) states that "bullying is unprovoked aggressive behavior meant to dominate, hurt or exclude another."

Bullying can be carried out by one person or group of people. Bullying targets can also be one person or group (Olweus, 1993). Olweus statement is supported by Sullivan (2004) that "bullying is a negative and often aggressive or aggressive or manipulative act or series of acts by one or more people against another person or people usually over a period of time".

Furthermore, Sullivan (2004) said that the bullying was a cowardly act because it was done to hurt because he knew the victim did not dare to retaliate. The purpose of bully is to hide their weakness. Bullying is repeated aggression, verbal, psychological or physical, conducted by an individual or group against others (Guidelines on Countering Bullying Behaviour in Primary and Post-Primary Schools, in Randall, 1996).

Workplace bullying is harassment of employees who are targeted by one or more other employees with a number of insults, intimidation, and acts of sabotage. Bullying in the workplace can include violence and threats of violence (Randall, 1996). Bully at workplace uses aggression to make themselves safe, control, sue, and insult other employees with verbal violence and make coworkers to fulfill their demands. Bully can be considered inappropriate for other individuals or groups of people that can cause health and safety risks.

Olweus (1993) states that in bullying there is a mismatch of strength to defend themselves and be powerless against abusive individuals. Olweus (1993) states that bullying consists of direct and indirect bullying. Direct bullying which is a relatively open act of oppression by directly attacking or criticizing. Indirect bullying is carried out by social isolation or neglect of a team. Furthermore, bullying is influenced by personal characteristics, family and life events, and the social environment tends to be anti-social.

Rodin (in Sarafino, 1994) says that self-control is an action in which individuals can make decisions and take effective action to get the desired results and avoid undesirable results. Self-control can be interpreted as behavioral control activities by making judgments before deciding to act. Individuals not only have self-control, but are also required to develop their abilities in sustainable manner to get better self-control. Messina (2005) states that without good self-control individuals will experience undesirable things in their life. So that individuals must be sensitive in seeing the situation of themselves and their environment, can control and manage behavior in accordance with the situation and conditions to present it in socializing. According to Messina (2005), there are things to watch out for, because it can cause individuals to lose control if this occur in a high degree or is excessive, these are anger, hunger, loneliness, and fatigue.

Self-control needed for two reasons are social and personal reasons (Calhoun and Acocella, 1990). Social reasons, that individuals do not live alone, but in the community so that individuals should control their behavior so as not to interfere with social peace or violate the comfort and safety of others. Personal reasons that self-control is needed by individuals to learn about the abilities, goodness, and other things in their culture. Communities encourage individuals to constantly set higher standards for themselves. Individuals should continue to learn to control impulses from within themselves.

There are three ways to control yourself which include five aspects (Averill, in Zulkarnain, 2002) are:

a. Behavioral control. Readiness or availability of responses that can directly affect or modify unpleasant situations. Behavioral control consists of two aspects, which are regulated administration and stimulus modifiability. Regulated administrations are individual ways to determine who controls a situation, themselves or something outside themselves. Individuals who have a good self-control will be able to regulate their own behaviour and if they are not able to, they will use external sources. Stimulus modifiability is an individual's way of knowing how and when unwanted stimuli need to be faced such as by preventing or avoiding stimuli, placing a time lag between a series of ongoing stimuli, stopping the stimulus before the time ends, and limiting its intensity.

b. Cognitive control. Individual ways of processing unwanted information by interpreting, evaluating, or combining an event in a cognitive framework as psychological adaptation or to reduce pressure. This aspect consists of two aspects, which are information gain and appraisal. By the information held by individuals about an unpleasant situation, individuals can anticipate the situation with various considerations. Appraisal means individuals try to assess and interpret situation or event by paying attention to the positive aspects subjectively.

c. Declaration control. Declaration control is the way individuals choose results or actions based on something they believe or approve. Self-control in making choices will

function well with the opportunity, freedom, or the possibility to choose various possible actions.

In performing its duties and responsibilities, an individual is not only doing their job in accordance with the procedure but also how the individual is giving attention to other individuals. Individuals must have the understanding and sensitivity abilities to relate to others. In addition, these individuals must also be responsive to the others needs and should be able to demonstrate understanding, compassion, and sense of humanity (Lewis, in Messer and Meldrum, 1995). However, individuals can sometimes make mistakes that can lead to a lack of good job performance and negligence of the worst (Messer and Meldrum, 1995).

This error can be caused by a lack of knowledge, lack of training and ability, negligence, lack of interest in routine activities, misdiagnosis or misunderstanding (Messer and Meldrum, 1995).

In addition, stereotyping can also affect the individual's performance, if other individuals have unpopular stereotypes, then the individual for any reason will be undervalued and too much demand (Abraham, 1997). Then, in a state of fatigue because excessive workload can cause individual to give up responsibility, ignore, reject, or retaliate verbally. Individuals who are bully as well as bully victim are described as having a high risk of having behavioral problems and higher symptoms of depression, lack of self-control and social skills, and lack of education functioning (Haynie, in Sullivan, 2004). When victims feel angry, sometimes they will bully others.

Bully does acts of bullying to hide their weakness (Olweus, 1993). Thus, although bullies seem stronger, bullies lack of confidence, lack of self-esteem, and feel insecure. Bullies who excite their resentment, hatred and deep anger, they also sometimes have prejudices to remove their anger to others.

The distinguishing factor between bullies and those who don't is the inability of individuals to express or control aggressive feelings (Sheras, 2002). One mechanism for bullying is a lack of self-control or prevention of aggressive behavior. Therefore, to fulfill their duties and responsibilities, individuals need good self-control. This is needed to help individuals overcome limited abilities and help individuals to overcome a variety of adverse things that might occur from outside (Kazdin, in Latipah, 2002). Because with self-control, individuals can set their performance standards and appreciate or punish themselves when they achieve or fail to meet those standards (Calhoun and Acocella, 1990).

Based on the discussion of the research variables, then the research hypothesis is formulated as follows:

Ha: There is a correlation of self-control and bullying tendencies of nurses;

Ho: There is no correlation of self-control and bullying tendencies of nurses.

METHODS OF RESEARCH

The sample consisted of 83 participants who were nurses in the base ward (class 3 inpatient units) and had worked for at least 1 year. In this study, the sampling method used was a saturated sampling technique (census) in which all members of the population was used as samples. Based on the existing population, the number of samples used in this study was 83 participants.

In this study, participants were measured using a bully scale using an instrument that refers to the theory of Olweus (1993) to assess to reveal aspects of bullying tendencies on participants who were on a five-point Likert scale as measured by teasing, intimidating and neglecting factors.

The self-control scale used by the instrument refers to Averill's theory (in Zulkarnain, 2002) to reveal aspects of how much self-control the participants on a five-point Likert scale as measured by controlling behavioral, modifying stimulus, anticipating stimuli, judging subjectively, and making a decision factor.

RESULTS AND DISCUSSION

In this study, the bullying scale consists of four factors, are cursing, teasing, intimidating, and ignoring factor, with a number of valid items as many as 14 of the 32 items that have represented four factors. To find the reliability of the instruments used in this study Alpha Cronbach technique, the Alpha coefficient of 0.8036 was reliable. The self-control scale consists of five factors, are controlling behavioral, modifying stimulus, anticipating stimuli, judging subjectively, and making a decision factor, with a number of valid items as many as 27 of 40 items that have represented five factors. To find the reliability of the instrument used in this study Cronbach Alpha technique, the alpha coefficient of 0.8730 was reliable.

The analysis of this study was intended to test the hypothesis to determine the correlation of self-control and bullying tendencies of nurses. Pearson Product Moment is used for data analysis. The result, obtained a correlation coefficient $r = -0,740$ with $p = 0,000$. The p value obtained is less than 0.05 ($p < 0.05$), so H_0 's hypothesis which states "there is no correlation of self-control and bullying tendencies of nurses" is rejected. While the alternative hypothesis (H_a) which states "there is a correlation of self-control and bullying tendencies of nurses" is accepted.

Based on these results, there is a significant correlation of self-control and bullying tendencies of nurses. Therefore, the higher the self-control nurse the lower the tendency of bullying so nurses tend not to bullying.

This study was supported by Vickers (2004) who stated that bullying urged targets of bullying and made the work environment uncomfortable by increasing stress and reducing self-control of the situation. Self-control is needed by individuals to be able to control and manage behavior according to circumstances to present themselves in socializing. So that nurses who have good self control can prevent bullying both for patients and colleagues, while nurses with poor self-control allow bullying. This is in line with the opinion of Olweus (1993) which states that one mechanisms of bullying are the lack of self-control or prevention of the tendency for aggressive behavior. Sheras (2002) also states that the factor that distinguishes between bullying and non-bullying is how to express or control the aggressiveness that may arise in each individual.

Based on linear regression analysis, self-control variables contribute to intimidation variables of 54.7% while the remaining 45.3% are influenced by other variables not examined. Based on the results of categorization in this study the score of bullying is in the low category with a mean value = 26,6145. While the self-control score is in the high category with mean = 104,2410.

CONCLUSION

In this study, the authors aimed to determine the correlation of self control and the tendency of nurse intimidation. Based on data analysis using Pearson Product Moment, the results obtained are there is a correlation of self control and bullying tendencies of nurses. The higher the self-control nurse, the lower the tendency of bullying so that nurses are not likely to do bullying. Thus, the alternative hypothesis (H_a) in this study which states that there is a correlation of self-control and the tendency of bullying to be accepted.

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**ANALYSIS OF THE EFFECT OF GOVERNMENT ROLE AND SOCIAL CAPITAL
IN DISASTER MANAGEMENT ON ECONOMIC RECOVERY OF DISASTER VICTIMS
IN THE SARBAGITA AREA OF BALI PROVINCE**

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ABSTRACT

Disaster management as part of development requires the common perception of various actors and the integration of its implementation to get results that are right on target, effective, efficient and sustainable, especially in efforts to accelerate the economic recovery of disaster victims. This research was conducted in the Denpasar, Badung and Gianyar regions of Bali Province to analyze the influence of the role of government, social capital and disaster management in the economic recovery of disaster victims. The results of the study show that the role of government and social capital has a positive and significant effect on disaster management. The role of government and social capital in disaster management has a significant effect on economic recovery. The government needs to conduct a more comprehensive study in determining strategies and policies in the field of disaster management and increasing mutual trust between communities and the government. The construction of an early warning system and physical infrastructure need to more concern because the success of the economic recovery program is inseparable from disaster risk reduction efforts.

KEY WORDS

Role of government, social capital, disaster management, economic recovery.

Disaster is a combination of natural and human activities that can cause loss of life, loss of property and damage to the environment and cause the results of development to be damaged or destroyed which can have an impact on the economic collapse of the community both directly and indirectly. In an effort to overcome the impact of the disaster, the Government of Indonesia has enacted Law Number 24 of 2007 concerning Disaster Management which regulates the processes and roles of various parties in the implementation of Disaster Management. There are three pillars of Disaster Management actors, such as the government, the community, and business institutions. Therefore, the implementation of disaster management is not only the government responsibility, but also the community and business institutions. The community and business institutions are required to play an active role in every stage of disaster management from pre-disaster, during emergency response and post-disaster.

It is because the community as the subject of disaster management is the main source of disaster management. Putnam (2002) states that the idea of the core of social capital theory is social networks. This stock of social capital leads to self reinforcing and cumulative (Putnam, 1993). For this reason, the content and scope of disaster management requires integration and good synergy between the role of government and social capital, from prevention management to reconstruction management.

But unfortunately, there are still many problems faced in achieving integrated disaster management including weak coordination, limited human resources, facilities and infrastructure and supporting equipment. The strategy applied in various disaster management programs should use the basic principle that disaster victims are not passive who only mourn their fate and wait for help.

Since 2011, the Provincial Government of Bali has implemented disaster management programs and activities with the community in developing themselves and their environment independently and participatively at every stage of disaster management from pre-disaster,

during emergency response and post-disaster in Bali Province. This followed up on the results of the Bali Bappeda and PPLH studies at Udayana University (2006) which showed that Bali Province had the potential and vulnerability to various natural and social disasters with the support of incident data with 6,245 disasters or disasters in regencies or cities throughout Bali.

One of the catastrophic events that had a broad impact on social, economic and psychological conditions was market fires, especially in the Denpasar, Badung, Gianyar Tabanan (Sarbagita) region of Bali Province. Traders will lose their place and business capital and potentially cause new unemployment problems, while on the consumer side they have difficulty obtaining their needs. Surya Aryanto (2011) in the study of the analysis of factors affecting market traders income after the Kliwon Temanggung market fire found that trading hours, trading capital and trading places simultaneously had a positive and significant effect on market traders income. But due to fires, market traders income variations declined to 81.7 percent. For this reason, the local government is expected to help provide capital with low interest and a repayment period that is in accordance with the ability of traders.

In addition to assistance from the government, disaster management activities are also carried out by the community and the business community in the form of fundraising, social services and so on. The participation of the community and the business community on disaster management aims to be able to reduce the risk of disasters that occur. However, it should be noted that the assistance of the community and the private sector is not only limited to providing assistance to disaster victims, but this assistance can lead to disaster risk reduction or prevention activities.

In terms of recovering victims of disasters, especially market fires in the Sarbagita area of Bali Province, it is still considered unable to show optimal performance. This is due to the fact that the recovery of victims of disasters is still running partially and is oriented towards disaster response. Along with the change in the management paradigm of the response from the original oriented during the emergency response to the stage of preparedness, it is deemed necessary to know the role of government and community social capital in disaster management towards the economic recovery of disaster victims in the Sarbagita region of Bali Province.

LITERATURE REVIEW

The government is the authoritative direction and administration of the affairs of men or women in a nation state, city, etc (Riawan, 2005). While Kaufman (in Thoha, 1995) states that the function of government is to serve and regulate society. If it is associated with disaster management, the indicator of the role of local government can refer to indicators of the role of the government in developing SMEs, namely as facilitators, regulators and catalysts (Diva, 2009).

Coleman (1999) states that social capital is an obligation and expectation, channels of information and social norms. Whereas Ridell (1997) in Suharto (2007), states that there are three main elements of social capital, such as trust, norms and networks.

Law No. 24 of 2007 states the importance of three pillars of Disaster Management actors, namely the government, the community, and business institutions to unite in carrying out disaster management. Broadly speaking, disaster management activities are classified into 6 (six) activities, such as mitigation, preparedness, early warning, emergency response, rehabilitation and reconstruction.

Recovery of post-disaster areas needs to be adjusted to the Regulation of the Head of the National Disaster Management Agency (BNPB) No. 11 of 2008 concerning the Guidelines for Post-Disaster Rehabilitation and Reconstruction. In the scope of the implementation of rehabilitation and reconstruction, post-disaster recovery includes social, economic and cultural recovery aimed at returning social, economic and cultural activities and communities in the affected areas such as before the disaster.

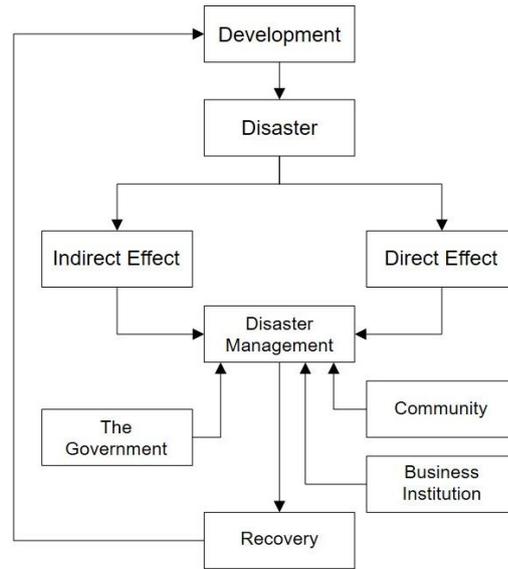


Figure 1 – Research Framework

The research conceptual framework influences the role of government and social capital in disaster management for economic recovery as follows:

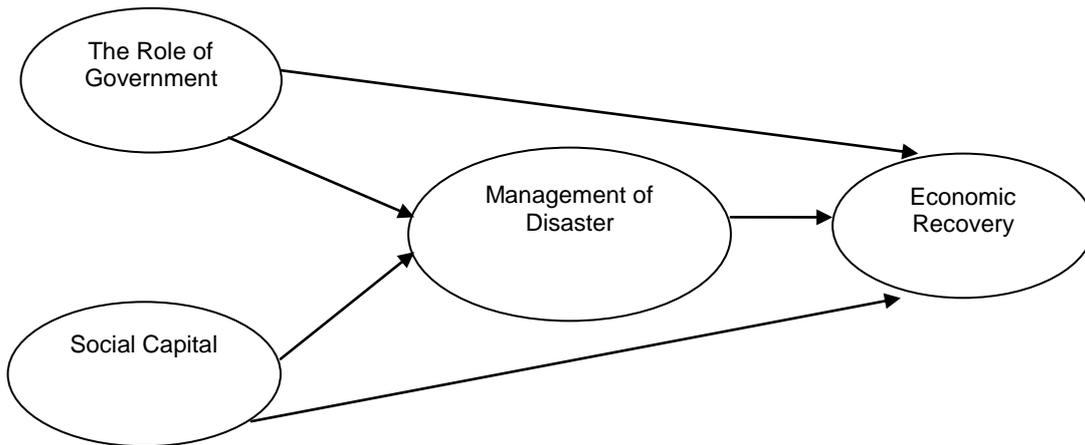


Figure 2 – Research Conceptual Framework

Based on the subject matter, research objectives, literature review and research conceptual framework, the hypothesis proposed in this study is as follows:

- The role of the government has a positive effect on disaster management;
- Social capital has a positive effect on disaster management;
- The role of the government has a positive effect on the economic recovery of post-disaster victims;
- Social capital has a positive effect on the economic recovery of post-disaster victims;
- Disaster management has a positive effect on the economic recovery of post-disaster victims;
- The role of the government indirectly affects the economic recovery of post-disaster victims through disaster management;
- Social capital has an indirect effect on the economic recovery of post-disaster victims through disaster management.

METHODS OF RESEARCH

The method used in this analysis was a quantitative method. The technique used in the data instrument test included validity and reliability. This study used Partial Least Square (PLS) which consists of a measurement model or an external model and a structural model or internal model.

In this study, the research subjects were traders who were victims of market fires in the Sarbagita region of Bali Province. The number of samples based on Slovin formula as many as 96 people was chosen strata, random and proportional. In addition, several opinions of government and community leaders were also needed to represent and can provide positive input for post-disaster economic recovery.

In this study, the independent variable was the role of government (X_1) and social capital (X_2), the variable between is disaster management (Y_1), while the independent variable is economic recovery (Y_2).

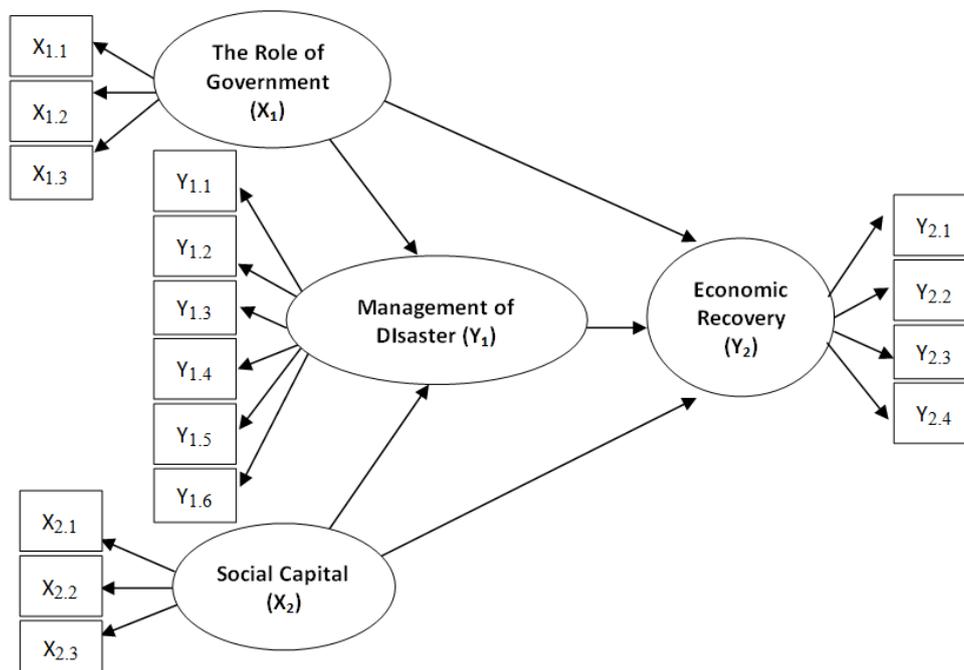


Figure 3 – Relationship between Research Variables

RESULTS AND DISCUSSION

The total determination coefficient of the structural equation from this research model shows that 61.6 percent of the economic recovery variables can be explained by the research model, while the excluded data is explained by other variables outside the research model.

The results of hypothesis testing show that the role of the government has a positive and significant effect on disaster management with a regression coefficient of 0.412. Social capital has a positive and significant effect on disaster management with a regression coefficient of 0.505. Disaster management has a positive and significant effect on economic recovery with a regression coefficient of 0.491. While the role of government has a positive but not significant effect on economic recovery with a regression coefficient of 0.190; and the direct effect of Social Capital has a positive but not significant effect on Economic Recovery with a regression coefficient of 0.163.

The role of government (X_1) has a significant influence on economic recovery (Y_2) through disaster management (Y_1) with a path coefficient of 0.202. Whereas social capital

(X2) has a significant influence on economic recovery (Y2) through disaster management (Y1) with a path coefficient of 0.248.

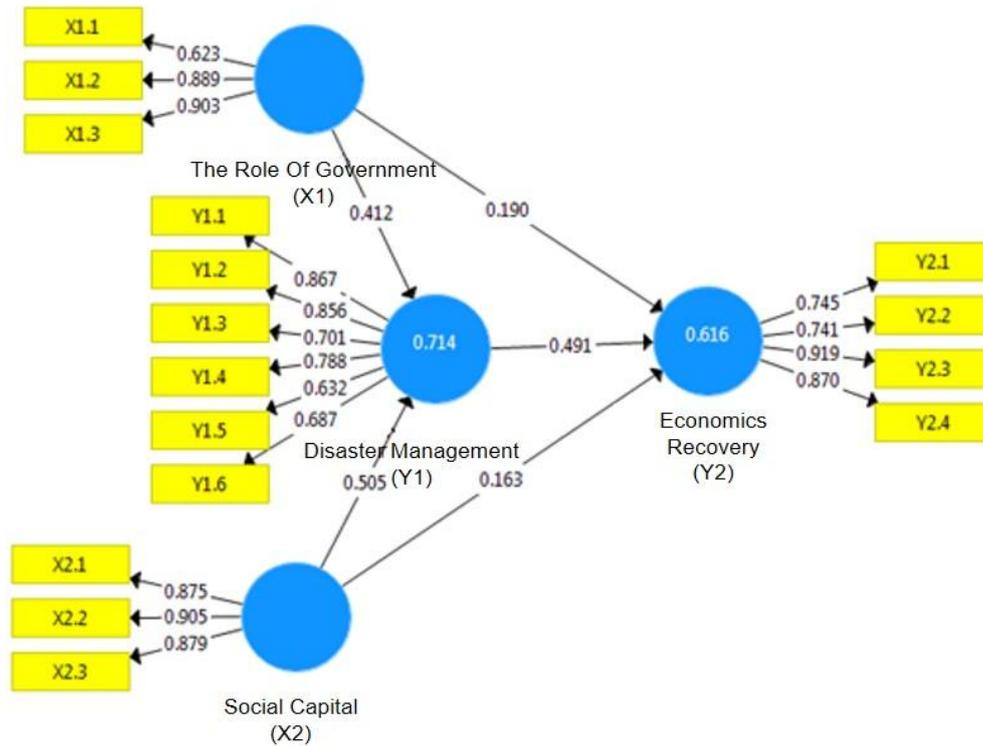


Figure 4 – Full Model of Determinants of Disaster Victims Economic Recovery in the Sarbagita Region of Bali Province

Table 1 – Direct Effect

No	Direct Effect	Original Sample	Standar Deviation	T Statistic	Information
1	The Role of Government → Management of Disasters	0,412	0,082	5,014	Significant
2	Social Capital → Management of Disasters	0,505	0,095	5,334	Significant
3	The Role of Government → Economic Recovery	0,190	0,147	1,295	Not Significant
4	Social Capital → Economic Recovery	0,163	0,130	1,252	Not Significant
5	Management of Disasters → Economic Recovery	0,491	0,130	3,770	Significant

Source: Results of Study.

Table 2 – Indirect Influence Test Results

No	Testing		Indirect Effect	Conclusion
	Direct Effect	Indirect Effect		
1	X1 → Y1 Coefficient = 0,412 (significant)	Y1 → Y2 Coefficient = 0,491 (significant)	X1 → Y2 with mediation Y1 0,412 x 0,491 = 0,202	The indirect effect of X1 on Y2 with mediation Y1 is significant
2	X2 → Y1 Coefficient = 0,505 (significant)	Y1 → Y2 Coefficient = 0,491 (significant)	X2 → Y2 with mediation Y1 0,505 x 0,491 = 0,248	The indirect effect of X2 on Y2 with mediation Y1 is significant

Source: Results of study.

DISCUSSION OF RESULTS

The results of the analysis in this study state that the role of the government has a positive and significant effect on disaster management. In line with the research conducted by Abdul Latief (2015) which highlighted the role of local governments in disaster management, the government has the responsibility and authority to integrate disaster management on development to protect the public from disaster threats by implementing efforts in various aspects including planning, institutions, funding and capacity building. Planned disaster management in development, both in the medium and long term, compiling contingency plans, emergency operations, recovery and integrating it with the Regional Spatial Plan. The establishment of National Board for Disaster Management and Regional Board for Disaster Management is intended to formulate and establish disaster management policies and handling disaster victims by acting quickly and accurately, effectively and efficiently, and coordinating the implementation of planned, integrated and comprehensive disaster management activities. In terms of funding, the government is obliged to allocate and account for the use of the budget for disaster management such as routine and operational funds, contingency funds and ready to use for emergency response, as well as rehabilitation and reconstruction recovery funds. In addition, the government can mobilize and oversee the collection of funds from the community and use and account for national & international donations or assistance. Capacity development includes the development of human resources in the form of formal, informal and non-formal education, managerial and technical training, drill practice, simulation and rehearsal, institutional development in the form of operations centers, data centers and media centers and infrastructure development in the form of information and communication technology improving the quality of services for disaster management programs.

The Director of Denpasar Regional Market Company IB Kompyang Wiranata stated that as one of the fire disaster relief efforts, the rebuilding of Badung Market had been started since 2017 and is expected to be completed by the end of 2018. With the completion of development, the market can already be used and traders can move from temporary selling location at Tiara Grosir to their new kiosk at Badung Market. The concept of revitalizing Badung Market is a public market with modern services equipped with elevators and escalators to facilitate movement and public facilities such as breastfeeding. In addition, Badung Market will apply certain standards to minimize fires. The Badung Market has a water reservoir located above the building to extinguish the fire in the event of a fire and place hydrants and smoke detectors in several places.

Disaster Management is a process cycle or flow of disaster risk reduction activities, starting from the planning, dissemination, implementation and supervision stages both at the time before they occur, when they occur and after the occurrence of a disaster. In order for disasters to be managed properly and safely, good disaster management is needed by the government. Planning, identifying resources, warning systems, training, simulations and actions taken by the government must achieve the main objectives of increasing the security and effectiveness of community responses during disasters. This is based on the consideration that the community can play a role not only as a disaster object but also as the subject of the disaster.

The results of the analysis in this study state that social capital has a positive and significant effect on disaster management. Social capital is the norm, institution and social relationship that form the quality of social interaction in society that allows people to work together. With the existence of trust, norms and networks in society, social capital is an important factor in disaster management. Social capital is needed by the community, especially in disaster-prone areas to anticipate the threat of disasters by utilizing the resources in their area.

The success of disaster management efforts depends on the active role of the community. Communities can take part in disaster management such as caring and disaster preparedness groups, increasing capacity in terms of disaster knowledge through education, training, skills and simulation or rehearsal, as well as carrying out disaster management

efforts. Social capital can be categorized into two levels, they are micro level in the form of networks that allow one to get help to reduce the suffering caused by the disaster, and at the macro level in the form of social organizations driven by citizens, supported by norms and mutual trust, to jointly and coordinated encourage the mitigation of the impact of disasters and the restoration of socio-economic conditions such as before the disaster occurred (Hawkins and Maurer, 2009). As stated by Ni Nyoman Witariyani, a vegetable trader at the Badung market:

"We were confused by the market fire incident at that time, what about the fate of our merchandise, capital was burned out, but we believe the public and the government will immediately provide the best solution even though it may not be as expected".

The application of social capital in the event of market fires in the Sarbagita region of Bali Province includes the trust of the victims that the government and the community will carry out efforts to accelerate their economic recovery even though there are some obstacles faced at the beginning of the post-fire such as loss of customers, narrow parking a narrow relocation place and far from the previous Badung Market. Good social capital will support the success of the community in dealing with natural disasters. This is in line with the research conducted by Silmi Annisa Fahma (2016).

The results of the analysis in this study state that the role of the government has a positive but not significant effect on the level of economic recovery of disaster victims in the Sarbagita region of Bali Province. Although not significant, the government has a role in efforts to develop a community economic recovery program in the form of assistance shortly after a disaster or an economic recovery program to restore disaster victims to normal life as before. As stated by A.A. Ketut Kartika, SH, Head of the Badung Market Unit:

"There are some things that can be done to ease the burden of traders based on the direction of the Minister of Cooperatives, including calling on the implementing banks of the People's Business Credit (KUR) to restructure the debt of traders of fire victims, and temporarily relocating market traders while waiting for market repairs to be completed".

Rebuilding infrastructure, providing stimulus funds, restoring social psychological conditions and public services play an important role in the process of reviving the post-disaster regional economy. With the existence of physical development, it will automatically open up employment opportunities which will indirectly rotate the economy which can increase people's purchasing power. However, the role of the Government should not bring the community into a trap of dependence (charity), the role of the Government must instead deliver to the recovery process of disaster victims independently.

The phasing of the reconstruction program is needed and in each stage a program that is right on target is designed and designed in such a way that in addition to restoring the situation (infrastructure, social and economic life, institutions, etc.), it is also intended to reduce the risk of loss and catastrophic events in the future. After the restoration is completed, the foundation for sustainable growth needs to be laid. Reconstruction should be an effort to reduce disaster risk in the future (ex-ante risk reduction), not merely an effort to restore the condition of an ex-post disaster (Nazamuddin, 2007). It is in line with the research conducted by Rizka Rahma Maulida (2015) which stated that the economic impact in NAD due to the tsunami disaster caused significant inflation of 7.02%. To overcome the economic impact, the basic principles and medium to long-term policy directions are drawn up.

The results of the analysis in this study state that social capital has a positive but not significant effect on the level of economic recovery of disaster victims in the Sarbagita region of Bali Province. Although not significant, social capital is a mechanism and the relationship between trust, norms and networks in social settings in an area (Woolcock, 1998). These values can be used as strong capital that is built in the community and local organizations in the protection of disaster-prone areas. For this reason, it is necessary to carry out an inventory of each type of local wisdom as a source and form of social capital. This is inseparable from the assumption that there is no society at all without having power. Every community must have power, but sometimes they are not aware or that power is still not explicitly known. Local potential must be explored and then developed where one of them is tolerance and mutual cooperation. If this assumption develops, social capital can be used as

a means to build power, by encouraging, motivating and raising awareness of the potential that is owned and trying to develop it. This is in line as stated by Dayu Kirana, a cloth trader at the Ubud market:

“At that time all of my merchandise burned out, but fortunately there was a kind friend to lend his merchandise, if the profit was divided in two, so first the way I survived selling”.

One of the determinants of the success of a development program is the potential of the community (Irawaty Igrisa). Population potential is the whole aspect associated with the condition or potential possessed by the population which includes the population, education level and comparison of the age of the population that can be used to develop the capacity of the population as program targets. Social capital is carried out to enlarge the potential of the community to develop their abilities which ultimately determines the success of a development program.

The results of the analysis in this study state that disaster management has a positive and significant effect on the economic recovery of disaster victims in the Sarbagita region of Bali Province. In the disaster, there are two key words, they are danger and vulnerability. Danger is an extraordinary natural phenomenon that has the potential to damage or threaten human life, loss of property, loss of livelihood, environmental damage. Whereas vulnerability to disaster impacts or risks is the condition or biological, geographical, social, economic, political, cultural and technological characteristics of a community in a region for a certain period of time which reduces the ability of the community to prevent, reduce, achieve readiness, and respond to the effects of certain hazards (Nurjanah, 2012). Thus the occurrence of disasters basically depends on the level of vulnerability of individuals, groups, environments, and institutions within a community.

In an effort to reduce the impact of disasters a disaster management management is needed that aims to increase the capacity and potential that exists in each individual and social group. This capacity can be related to resources, skills, knowledge, organizational capabilities and attitudes to act and respond to a crisis. Disaster management is a series or cycle of activities starting from the establishment of development policies based on disaster risk and followed by stages of disaster prevention activities, emergency response and rehabilitation. As stated by I Komang Kusumaedi, Head of the Emergency and Logistics Division of the Bali Province Disaster Management Agency:

“Programs with preventive, mitigation, preparedness content to the early warning that is available in each of these regional organizations must be able to connect, collaborate and together we choose to be implemented in Bali. Because BPBD cannot and is impossible to work alone in making disaster risk reduction programs without the support, participation, assistance and collaboration of other regional device organizations”.

Disaster risk reduction proclaimed by policy makers must be able to reduce the threat of disaster hazards, increase capacity and reduce vulnerability, and pay attention to the links between disasters and development. Everyone needs to be introduced to various disaster hazards in their area, ways to avoid and reduce the hazards and vulnerabilities they have, and improve their ability to deal with disasters. In its implementation it is necessary to follow and pay attention to local wisdom and traditional knowledge in the community.

Recovery is the beginning of rebuild and become a part of the development that is generally carried out. The aim is to develop social, economic and cultural activities with the main goal of functioning as a return to social and cultural economic activities, the establishment of law and order and the rise of community participation in all aspects of life. The recovery aspect is related to the improvement and restoration of all aspects of public or community services to an adequate or normal level, including socio-economic recovery for the medium and long term.

Disaster management policies prepared by the government for economic recovery of disaster victims will be more beneficial if the community is involved both directly and indirectly in all efforts to reduce disaster risk. This is because the public knows more about potential hazards, threats, vulnerabilities and capacities that are in accordance with their territory. The implementation of effective and efficient disaster management needs to be supported by all pillars, such as the government, business institutions and the community. In

addition, it is necessary to implement a national movement to arouse awareness, increase awareness and preparedness of all stakeholders, including government, society and business institutions as an effort to change the paradigm of disaster management from disaster emergency response to reducing and managing disaster risk. As stated by Ida Bagus Yama, Head of the Prevention and Preparedness Division of the Bali Province Disaster Management Agency:

“Disaster education must be started early, especially in disaster-prone areas, to schools through teachers and the community, and to carry out regular and continuous disaster management simulations”.

Through practice and simulation it is hoped that the community can recognize disaster threats and be vigilant in disaster emergency situations. Desti Nisa Isti's research (2017) shows that almost all government programs and projects require community participation and empowerment that determine the success of development programs.

In an effort to succeed the economic recovery of disaster victims, Social Capital is very much needed in efforts to mitigate the impact of disasters, besides physical capital, financial capital, human capital (Hawkins and Maurer, 2009). Communities and business institutions can initiate activities that are able to alleviate the suffering of fellow citizens who are affected by disasters, at least in the short term, such as providing substantial labor and material assistance. However, the government's role in medium and long term recovery remains irreplaceable. As stated by I Nyoman Gunawan, fruit traders in the Badung market:

“Indeed the community helped by collecting donations, the government also relocated us temporarily in order to remain able to sell but the size was very narrow. Indeed, for a while, but the calculation is not monthly, but it can be annual because the rebuilding of the market is quite long, making us also lose customers, if we like this we continue to lose money”.

Disaster management policies and programs carried out by the government must pay attention to the socio-economic conditions of victims of diverse disasters and local cultures. Communities with weaker socio-economic status tend to have more limited social capital than socioeconomic stronger communities. The recovery efforts carried out by the government, the community and business institutions must be more intensive and comprehensive for victims of disasters with weak socio-economic conditions considering that financial capital, resource capital (knowledge and skills) and social capital (social networks) are generally weaker. This is in line with the results of research conducted by R.A Tachya Muhamad, et al (2017).

CONCLUSION AND RECOMMENDATIONS

The role of government and social capital has a positive and significant effect on disaster management in the economic recovery of disaster victims in the Sarbagita region of Bali Province. If the role of government and social capital increases, disaster management will also improve.

The role of government and social capital has a positive effect with low significance on the economic recovery of disaster victims in the Sarbagita region of Bali Province. If the role of government and social capital increases, the economic recovery will also increase but not significantly. Whereas disaster management has a positive and significant effect on the economic recovery of disaster victims in the Sarbagita region of Bali Province, which means that the better the disaster management, the economic recovery will also increase.

The role of government and social capital has an indirect significant effect on the economic recovery of disaster victims in the Sarbagita region of Bali Province through disaster management. If the role of the government and disaster management gets better, the economic recovery will also improve. Likewise, the better social capital and disaster management, the better economic recovery will be.

Based on the results of the study, several suggestions can be made to accelerate the economic recovery of disaster victims in the Sarbagita region of Bali Province as follows:

The government as the regulator must take a stand in improving disaster management programs towards a better one by conducting policy socialization and thorough evaluation both in terms of facilities, infrastructure and quality of human resources. The prepared disaster management program is strived to be sustainable and directed in the short, medium and long term.

Efforts should be made to increase mutual trust between the community and the government, especially in terms of disaster management and economic recovery activities such as reducing rapid response time, providing disaster relief, capital assistance and implementing educational programs for disaster risk reduction.

Disaster management programs must continue to be improved to improve the economic recovery of disaster victims. One of them is by providing an integrated early warning system that can provide information quickly and precisely by utilizing all communication information technology media. Of course the infrastructure that has been built must be supported by an adequate maintenance budget so that the system can function optimally.

Economic recovery can be accelerated by providing physical infrastructure that meets safety standards and protection against disasters. Collaboration with financial institutions or banks related to delays in payment of bank loans by traders, extension of credit repayments, soft loan distribution for strengthening and development of capital are also expected to be able to assist the economic recovery process for medium and long-term rehabilitation and reconstruction. In addition, the economic recovery of disaster victims can be improved by considering other external factors, namely the participation of the business or the private sector, the superior potential of the population and the natural resources of the disaster location, the development of science and technology, and social, economic, political and cultural institutions local.

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ROLE AND CREATIVITY OF PROACTIVE PERSONAL IN CREATIVE INDUSTRIAL SECTOR OF ENTREPRENEURSHIP

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ABSTRACT

The purpose of this paper is to explore the relationship between proactive personalities towards entrepreneurship. This paper proposes creativity as a mediation to see an increasing change in entrepreneurship. Data was taken through targeted sampling strategies from 153 fashion subsector entrepreneurs. The hypothesis is tested by structural equation modeling. The findings show that there is a positive relationship between proactive personality towards entrepreneurship mediated by creativity. The value of this paper is one of the first to explore the relationship between a proactive personality and creativity towards entrepreneurship. This fact also supports the argument that entrepreneurship really requires creativity to be able to compete and continue to grow in the creative industry.

KEY WORDS

Proactive personality, creativity, entrepreneurship, industry.

Entrepreneurship is experiencing a relatively rapid change from day to day. Current changes are fast enough to force business people to be able to adapt to these changes. The need for a new perspective to be able to compete is needed by entrepreneurs. Concepts such as the hyper power of competition, in speed, aggression, adaptability and flexibility can reflect the field of entrepreneurship. Therefore, entrepreneurs today must be flexible, and strategic. Regarding this, many researchers in the literature discuss entrepreneurship which is associated with proactive personality and creativity (Dogan, 2015). At present, entrepreneurship for the creative economy in developed countries in the formation of gross domestic income or GDP is very large and even shifts other economic sectors. The growth of the creative industry in Singapore grew by an average of 2.8%, in the UK it reached 8.2% and Australia 5.7%. While the growth of the creative industry in Indonesia, seen from its contribution to GDP in 2008 amounted to 7.28%, absorption of employment is 7.6 million and its role in exports amounted to 114.9 trillion (Plan for the development of Indonesia's creative economy 2009-2025, Ministry of Trade of the Republic of Indonesia, 2008).

The role of entrepreneurship in economic growth does not merely increase output and income per capita, but also involves the introduction or application of changes in business structure and society (Hisrich, et. Al, 2008). Timmons and Spinelli (2004) describe the evolution of entrepreneurship that has changed the world in the past 40 years into four forms of entrepreneurial transformation. Entrepreneurial transformation can influence how the world community lives their daily lives, works, studies, and enjoys leisure time. The four transformations consist of entrepreneurship as a new paradigm in management; entrepreneurship as a new paradigm in education; entrepreneurship as a new paradigm in non-profit business management and philanthropy; and entrepreneurship as a curriculum in business schools.

The creative economic era of the individual's role reflected in one's personality is needed in developing an entrepreneurship. Highly proactive individuals are able to identify opportunities and take appropriate actions to take advantage of opportunities, and defend them until significant changes occur (Crant 1996). The idea of creative industries

in developed countries is developed on concepts and phenomena, many developing countries have begun to adopt these ideas as a medium to build a region or city (Fahmi, Koster and van Dijk, 2016). Researchers argue that to make a region of the creative industry is the most important thing for advancing the region. Developing a creative industry is not independent of the creativity of the people in the region, where the effect of creativity in entrepreneurship is empirically influential (Baron and Tang, 2011). The most important contribution from the results of this research is that creativity can influence important activities in business activities, especially in the creative industry sector.

Finally, by inputting creativity as a mediating variable, this study reflects the recommendations of (Baron and Tang, 2011) for applying a multi-level approach in an effort to understand the phenomenon of entrepreneurship in complex creative industries. This approach has been used in several branches of management, but has just been adopted for entrepreneurial research. The researcher believes that the mediation model proposed is an application that is useful for gaining insight into key aspects of entrepreneurship. Furthermore, researchers describe the theoretical and empirical foundations of this model and obtain specific propositions that can be further tested.

LITERATURE REVIEW

The positive relationship between proactive personality and creativity, where the proactive person is a very important part of increasing creativity in the work environment (Kim et.al, 2010). This research indicates that a person with a proactive personality will tend to be resistant to all forms of external pressure and will influence changes to the environment by observing observant opportunities, showing high initiative so that they can take actions that will bring positive change in a work environment. Broadly speaking, workers who are assumed to be proactive will produce a high level of creativity when compared to workers who do not have a proactive personality. Creativity that is supported by the ability to innovate in entrepreneurship also influences the development of entrepreneurship, especially in the small and medium industrial sector (Hadiyati, 2011). Entrepreneurship grows and develops due to the proactive personality possessed by dominant entrepreneurs will influence the daily activities of entrepreneurs. Proactive in seeing new opportunities to get orders, and seeking for new information is a real support made by entrepreneurs to run their business (Handayani et.al, 2014).

Referring to previous research, the grand theory used is Drucker's concept (1959), where entrepreneurship is a way for someone to create opportunities by using existing resources in forming or creating a new business. The indicator used as a measure for entrepreneurship is commitment; ambitious; take risks; confidence; inventive; feedback; hard work; excellence; future oriented; learn from failure and leadership (Zimmerer, 1996). The development of entrepreneurship in a region is also supported by creativity in developing oneself into a creative entrepreneur. Creativity is defined as a person's ability to create problem solving ideas (Zimmerer, 1996). The indicator used to measure this creativity variable is having a creative idea; have conceptual; originality; complexity and skill (Campbell, 1986). The dynamic development of entrepreneurship in the creative industry has led to changes in the business environment. With the proactive personal character that is possessed, it can make entrepreneurs stay in their business. Proactive personality is conceptualized by researchers as the ability of a person not to be easily influenced by the environment and able to create changes in his environment (Bateman & Crant, 1993). Proactive personality is measured by indicators of responsibility, focus on work, giving examples, having principles and uniqueness (Covey, 1989).

METHODS OF RESEARCH

The methodology for looking at proactive personal roles and creativity in entrepreneurship uses statistical structural equation modeling (SEM) techniques and includes procedures and considerations involved in SEM (Hershberger, Marcoulides and

Parramore, 2009). Some of the considerations used are correlation matrix and good of fit index (McDonald and Ho, 2002). Tests were carried out on the textile industry as many as 153 entrepreneurs. The amount is obtained by using the Slovin formulation with formula $n = N / (1 + Ne^2)$ with the total entrepreneur population of 618 and alpha level of 7% (Stephanie, 2012). Sampling from the existing population uses simple random sampling which is commonly used in different business units (Pathak, 1988). All entrepreneurs were given questionnaires in the form of statements that had been given answers (Ornstein, 2014). Answers are provided using a Likert scale and given a score of 1 to 5 (McIver and Carmines, 2011).

RESULTS AND DISCUSSION

Figure 1 is the result of a structural equation model. Model suitability assessment is carried out by considering eight criteria of Goodness of Fit Index of models. As shown in figure 1, the results of the assessment of the suitability of the model, namely Chi Square, Probability, RMSEA and GFI have good value, AGFI has a marginal value, CMIN / DF has good value, TLI has value well and CFI has good value. Based on the above explanation regarding the Goodness of Fit criteria, it can be concluded that only AGFI has a marginal value while the other measurements can be said to be good. The value of the factor loading of each indicator on proactive personal variables, creativity and entrepreneurship has a value greater than 0.50 and the value of the critical ratio (CR) of each indicator greater than 2.0. This gives the conclusion that each indicator is significantly a dimension of proactive, creative and entrepreneurial personal variables.

The assumptions testing used in this study include normality test, outlier test and multicollinearity test. Based on the results of the tests that have been carried out, it can be concluded that the normality test results in the distribution of normally distributed data so that the data obtained can be used as a basis for further analysis, whereas for Outlier testing produces data that have no outliers in the research data. Multicollinearity testing concluded that the entire data used in this study is feasible for further analysis.

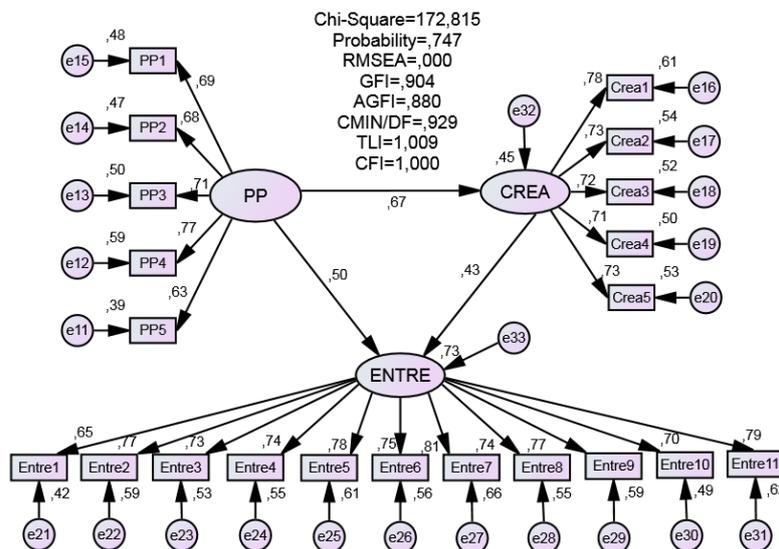


Figure 2 – Full Standardizer Structural Equation Modeling

The results of the path coefficients of influence between variables are as follows: (H1) the value shows that the proactive person has a direct effect on creativity, the probability value on the proactive personal variable is $0,000 > 0,05$, based on this result H_0 is rejected and H_1 is accepted. The coefficient value shows a positive value, meaning that there are active personal changes to creativity; (H2) states that the proactive person has a direct effect on entrepreneurship, the probability value of the proactive personal variable is $0,000 > 0,05$,

based on these results H0 is rejected and H2 is accepted. If the proactive person experiences positive changes it will also have a positive impact on entrepreneurship, this condition can be reflected in the value of the coefficient that has a positive value; (H3) the third hypothesis states that creativity has a direct effect on entrepreneurship, the value of probability in the creativity variable is $0,000 > 0,05$, based on these results H0 is rejected and H3 is accepted. There are clear changes if creativity increases, entrepreneurship also increases and vice versa; (H4) the fourth hypothesis is acceptable, that creativity is able to be mediation for a proactive person in increasing entrepreneurship. these results can be reflected in the total value greater than the indirect value ($0,843 < 0,288$). Following table 1 presents the results of hypothesis testing, and then the hypothesis is tested using analysis of structural equation modeling.

Table 1 – Results of Inter Variabel Effect Line Coefficients

Hyp	Variable			Regression Coefficient			
	Exogenous	Mediation	Endogenous	Direct Effect		In-direct effect	Total
				Coef.	Prob		
H ₁	PP	Crea	-	0,672	0,000	-	-
H ₂	PP	-	Entre	0,505	0,000	-	-
H ₃		Crea	Entre	0,428	0,000	-	-
H ₄	PP	Crea	Entre	-	-	0,288	0,843

Source: Primary Data, 2018.

The creative industry, especially its fashion development, cannot be separated from how entrepreneurs have the ability to quickly grasp the opportunities that exist by utilizing the resources owned by these entrepreneurs (Drucker, 1959). These opportunities can be obtained from the hard work of entrepreneurs in creating fashion products to have more competitiveness in their industry. hard work is the most dominant factor in entrepreneurship based on the results of the value factor loading. While the factor that needs to be considered for improvement is the commitment of entrepreneurs to always meet the needs of users of their products. Creative industries in a region can grow if people in the region have an active personality in entrepreneurship. Proactive entrepreneurial personality can be seen from its ability to create good change for other entrepreneurs (Batement and Crant, 1993). The community can create a change, the entrepreneur must have the principle of bringing the fashion industry to continue to be developed and be able to compete with other industries. The real form is to provide an example of always focusing on work and responsibility for all the activities he does. Then the very important nature needs to be improved in terms of the proactive personal attitude towards entrepreneurship is the nature of uniqueness. The rapid development of the fashion industry also encourages entrepreneurs to have the ability to create new ideas in capturing opportunities with their creativity (Zimmerer, 1996). The ability to deal with the complex problems that are always faced is the main factor that must exist in a fashion entrepreneur to get opportunities that are accompanied by skills in producing better product design, whereas to be able to consolidate the concept of business, entrepreneurs must have strong principles.

There are several limitations in our study. The use of samples that only focus on the fashion sub-sector in the creative industry is considered by researchers to have not been able to fully describe the facts of entrepreneurship in creative industries in a region. Respondents who are the object of research are entrepreneurs in small and medium business groups. The current situation in the creative industry, which is marked by major and rapid changes after the digital revolution, and the benefits of the roadmap as a means for the Creative Industry (Abbasi, Vassilopoulou and Stergioulas, 2017). To maximize the use and value of technology in the Creative Industry must focus on technology that facilitates entrepreneurs. It is recommended to put in the information technology variable to provide further verification of entrepreneurship theory for the creative industry.

CONCLUSION

Entrepreneurs in Bandung's fashion creative industry run their business based on the proactive personality that exists in individual entrepreneurs, so creativity to develop ideas with intellectual abilities and find new ways to get opportunities can also be created. Entrepreneurship in the city of Bandung grows because the entrepreneur has the intellectual ability to create an opportunity with the proactive personality that the entrepreneur has. Entrepreneurship can be created if the entrepreneur is personally proactive with responsibility as the main characteristic in completing work. The fashion industry players in the city of Bandung are currently paying attention to the factors of creativity in carrying out their business activities. Businesses in the fashion industry are recognized by entrepreneurs as having to have the creativity to complete very complex jobs as a preferred factor if they want to survive in the industry. In general, creative people prefer complexity than convenience, choosing challenges rather than security. So that the ability to compete in the creative industry will create new markets share in the fashion business. Entrepreneurship in the fashion industry currently requires considerable creativity from business people in the industry. Facts prove that creativity is a factor that is able to mediate proactively the person itself, so that a new business can be created and have the characteristics of the products that being produces.

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TECHNOLOGY ACCEPTANCE MODEL AND TRUST IN EXPLAINING CUSTOMER INTENTION TO USE INTERNET BANKING

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ABSTRACT

The purpose of this study is to explain the effect of the Application of Technology Acceptance Model and Trust in Explaining Customer Intention to Use Bank Negara Indonesia (BNI) Internet Banking in Denpasar. The sampling technique in this study was purposive sampling because the population was not known with certainty. The indicators in this study were 20 indicators, so the total respondents were 200 people. The criteria for determining the sample are BNI customers who have never used the internet banking feature and have at least graduated from high school/equivalent. The data collection technique used in this study was questionnaire techniques. The data obtained were analyzed using SEM (Structural Equation Modeling) analysis. The results shows that perceived ease of use has a positive and significant effect on perceived usefulness BNI internet banking. Perceived ease of use has a positive and significant effect on attitude towards use BNI internet banking. Perceived usefulness has a positive and significant effect on attitude towards use BNI internet banking. Attitude towards use has a positive and significant effect on intention to use BNI internet banking. Perceived usefulness has a positive and significant effect on intention to use BNI internet banking. Perceived ease of use has a positive and significant effect on intention to use BNI internet banking. Trust has a positive and significant effect on attitude towards use BNI internet banking. Likewise, trust has a positive and significant effect on intention to use BNI internet banking.

KEY WORDS

Perceived ease of use, perceived usefulness, attitude towards use, intention to use, trust, TAM, Bank Negara Indonesia.

The development of information technology (IT) has an impact on the ease in which people move. Coupled with the development of new IT products such as laptops, tablets and mobile phones, it's easy to communicate on a mobile basis. The internet is one of the features of IT products that can access various information quickly and easily. In many service industries, technology dramatically changes the service process which once required many employees to interact with customers. Now technology-based systems help service processes and interactions with customers.

The Banking Institution is a service company, continuing to innovate to face competition with other financial institutions. Banking Institutions utilize the advances in information technology in their operations. Some banking service features that use IT advancements are phone banking, SMS banking, and internet banking.

Internet banking is a banking service facility that is accessed using IT products that are connected to the internet network. Internet banking makes it easy for customers to carry out banking transactions whether financial or non-financial transactions such as fund transfers, balance information, account transfers, exchange rate information, credit card, telephone, handphone and electricity bill payments, purchase transactions such as top-up credit and Flight Tickets (www.bi.go.id, 2012).

The attitude model used to measure attitudes towards technology applied to previous research is the TAM (Technology Acceptance Model) such as in South Korea with e-learning objects (Park, 2009), in Malaysia with internet banking objects (Raman, 2011), and in Kentucky America about the World Wide Web.

TAM is a model built to analyze and understand the factors that influence the acceptance of the use of computer technology put forward by Fred Davis in 1986 which is the development of TRA developed by Fishbein and Ajzen (Medyawati et al., 2011). The TAM model by Fred Davis consists of four variables perceptions of ease of use, perceived benefit, attitude to use, and intention to use.

Trust is one of the variables that influences the customer's attitude and intention to use internet banking. Research on the influence of the variable trust in attitude variables to use has been carried out as in the study by Al-Somali et al. who took up research in Saudi Arabia, showed that trust has a positive and significant influence on the attitude of internet banking users (Tjini and Baridwan, 2013). This research is supported by similar research in Malaysia by Al-Ajam and Nor (2013), and research in London by Alsajjan and Dennis (2006).

In some previous studies, the low internet banking revenue was caused by a lack of trust from customers in the internet banking application. In the study by Alsajjan and Dennis (2006) in his research in London it was stated that the influence of online banking trust on intention to use was clearly seen. Other research in Nigeria by Ayo et al. (2010) found similar results, namely trust in a positive and significant effect on the intention to use e-banking. In another study in Nigeria it was found that there was a positive and significant influence on attitudes to use (Akinyemi et al., 2013). Research by Mohan et al. (2013) in Malaysia found different results that trust does not have a positive and significant influence on intention to use. The results of the study of Mohan et al. supported by Rahmawaty's (2013) research conducted in Indonesia.

The phenomenon of low use of internet banking applications can be seen in use at Bank Negara Indonesia (BNI). BNI is one of the leading banks in Indonesia. Ever since 2007 BNI has had internet banking facilities. In BNI, transactions through electronic facilities continue to experience growth. The number of BNI e-Banking users is around 9 million Debit Card customers, 1.56 million BNI PhonePlus, 618,000 BNI Internet Banking users, and 3.25 million SMS Banking users. The achievement of transaction volume until August 2012 for BNI Phone Banking reached Rp. 448.96 billion. BNI Internet Banking reached Rp. 15.96 trillion, and BNI SMS Banking reached Rp. 6.86 trillion (bni.co.id, 2013). Based on this data, it is known that the adoption of the use of BNI Bank's bank facilities is the slowest compared to other BNI facilities.

Therefore, the purpose of this study is the behavior intention of customers to use internet banking services by focusing on users' perceptions of ease of use, internet banking benefits, attitudes towards internet banking, and trust in internet banking in meeting their banking needs.

LITERATURE REVIEW

The banking industry is an industry that markets services as a product. In the service industry is one important factor in the success of its marketing. In supporting its services, the bank has several technology products that help service performance such as sms banking, phone banking and internet banking. Internet banking is one of the leading products of the banking industry. Internet banking is a system where individuals, businesses or customers have access to their accounts, transact or transfer money, pay bills, obtain information about bank accounts and utilize other banks through the internet (Mukhtar, 2015).

The model most often used to measure IT acceptance is the Technology Acceptance Model (TAM). This model was first put forward by Davis based on the Theory of Reasoned Action (TRA) by Fishbein and Ajzen in 1975 in psychological research.

In Abeka (2012) TAM is defined as information theory which aims only to predict and explain user acceptance of information technology. This model discusses the reasons why users accept or reject certain parts of information technology. The basic concept of this theory is that perceptions of benefits, perceptions of ease of use and attitudes to use affect the user's intention to use information technology both directly and through mediating attitudes towards behavior, which leads to real use of the system. Perception of ease of use is the level at which someone believes that using the internet banking system will free up

physical and mental effort. Benefit perception is a measure of individual subjective assessment of internet banking use in completing tasks. The attitude to use is defined as positive or negative feelings about the behavior of using internet banking. The intention to use is the tendency of behavior to continue using internet banking.

Trust is a belief in something and believes that in the end it will bring goodness or profit (Trisetyanto and Mudiantono, 2011). The banking industry is closely related to high levels of trust such as security and privacy issues (Yauzafzai et al. 2011).

RESEARCH FRAMEWORK

The use of information technology in the form of internet banking in supporting banking transactions is an important thing to study. The low use of internet banking will cause a low return on organizational investment in internet banking technology. The thinking framework of this study uses the TAM Davis model which uses four variables, namely perceptions of benefits, perceptions of ease of use, attitude to use, and intention to use added with confidence variables.

Based on this frame of mind, the conceptual framework of the research can be described, as follows.

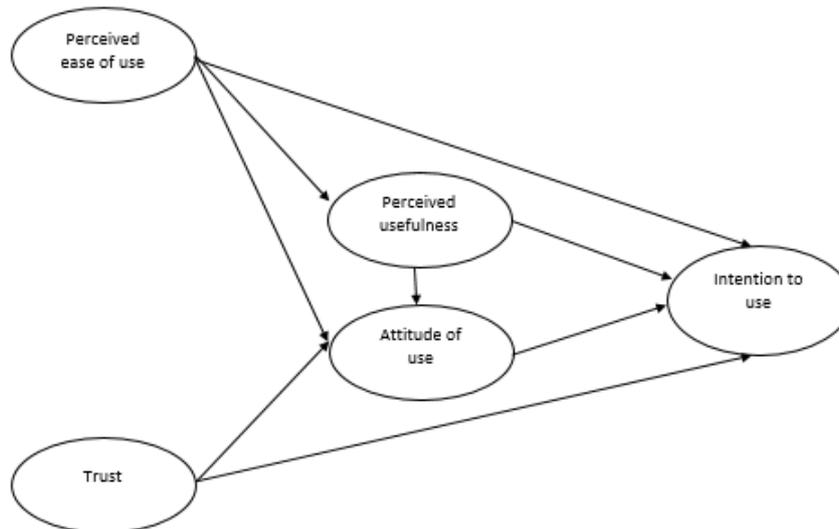


Figure 1 – Research Conceptual Framework

Based on the existing conceptual framework, the research hypotheses that can be compiled are as follows:

- H₁ Perceptions of ease of use have a positive and significant effect on the perceived benefits of Bank Negara Indonesia internet banking.
- H₂ Perception of ease of use has a positive and significant effect on the attitude to use Bank Negara Indonesia internet banking.
- H₃ Benefit perception has a positive and significant effect on the attitude to use Bank Negara Indonesia internet banking.
- H₄ The attitude to use has a positive and significant effect on the intention to use Bank BNI internet banking.
- H₅ Benefit perception has a positive and significant effect on the intention to use Bank Negara Indonesia internet banking.
- H₆ Perception of ease of use has a positive and significant effect with the intention to use Bank Negara Indonesia internet banking.
- H₇ Trust has a positive and significant effect on the attitude to use Bank Negara Indonesia internet banking.
- H₈ Trust has a positive and significant effect on the intention to use Bank Negara Indonesia internet banking.

METHODS OF RESEARCH

This research was conducted to determine the behavior of bank customers, especially BNI in Denpasar City. The behavior focused on the research is how strong the customer's intention to use internet banking is seen from the customer's perception of the benefits of internet banking, ease of using internet banking, trust in internet banking, and his attitude to using internet banking.

In this study there are two types of variable data to be examined, these variables are: 1) Exogenous Variables: perceptions of ease of use (X1) and trust (X2); and 2) Endogenous Variables: perception of benefits (Y1), attitude to use (Y2), and intention to use (Y3).

The population of this study is BNI customers in Denpasar who have never used internet banking with a minimum high school education level or equivalent and know about internet banking. The sample size of this study is 200 customers.

This study uses a questionnaire as an instrument in collecting data from respondents. The questionnaire contains several questions regarding the identity of the respondent and several statements about the variables in the study. Furthermore, the statements contained in the questionnaire are research indicators and measured using a Likert scale.

The instruments used were tested for validity and reliability in order to measure what they wanted to measure, and the consistency of the responses given by respondents. High and low validity shows the extent to which the data collected does not deviate from the description of the intended variable. Furthermore Sugiyono (2013: 178), argues that a variable is said to be valid if $r_{\text{alpha}} > r_{\text{table}}$. An instrument is said to be valid if the correlation (r) ≥ 0.30 . Instrument reliability testing of a variable is said to be reliable if $r_{\text{alpha}} > r_{\text{table}}$. An instrument is said to be reliable if the correlation value (r) is above 0.60 or the Cronbach's Alpha value is ≥ 0.60 . Both tests used the SPSS version 22 computer program.

The causal relationship formulated in this study uses a complicated model, the variables in the model are recursively shaped. The form of a causal relationship like this requires an analytical tool that is able to explain the relationship, so that the inferential statistical method used in the data analysis of this research is Structural Equation Modeling (SEM).

RESULTS OF STUDY

Figure 2 shows all good goodness of fit index criteria which are indicated by X2-Chi-Square value of 180.425 and probability greater than 0.05, which is 0.153, GFI index with a value of 0.922 is good and AGFI index with a value of 0.899 is in the criteria marginal. Furthermore, the CMIN / DF index with a value of 1.114, TLI with a value of 0.989, CFI with a value of 0.991 and RMSEA with a value of 0.024, all are in good criteria, TLI and CFI indices are strongly recommended, because this index is relatively insensitive to sample size and less affected by the complexity of the model (Ferdinand, 2002: 76), so that this model meets the standards of goodness of fit seen from the value of TLI (Tucker Lewis Index) and CFI (Comperative Fit Index).

Table 1 – Estimated Model Regression Weights

Regression Weights			Estimate Unstandardize	S.E.	Estimate Standardize	C.R.	P
Benefits (y1)	<---	Convenience (x1)	.190	.073	.219	2.593	.010
Attitude (y2)	<---	Benefits (y1)	.427	.078	.487	5.483	***
Attitude (y2)	<---	Trust (x2)	.248	.056	.341	4.445	***
Attitude (y2)	<---	Convenience (x1)	.159	.056	.210	2.840	.005
Intention (y3)	<---	Convenience (x1)	.150	.067	.138	2.234	.025
Intention (y3)	<---	Attitude (y2)	.561	.132	.392	4.237	***
Intention (y3)	<---	Benefits (y1)	.513	.105	.409	4.882	***
Intention (y3)	<---	Trust (x2)	.225	.070	.216	3.212	.001

Source: Data processed, 2017.

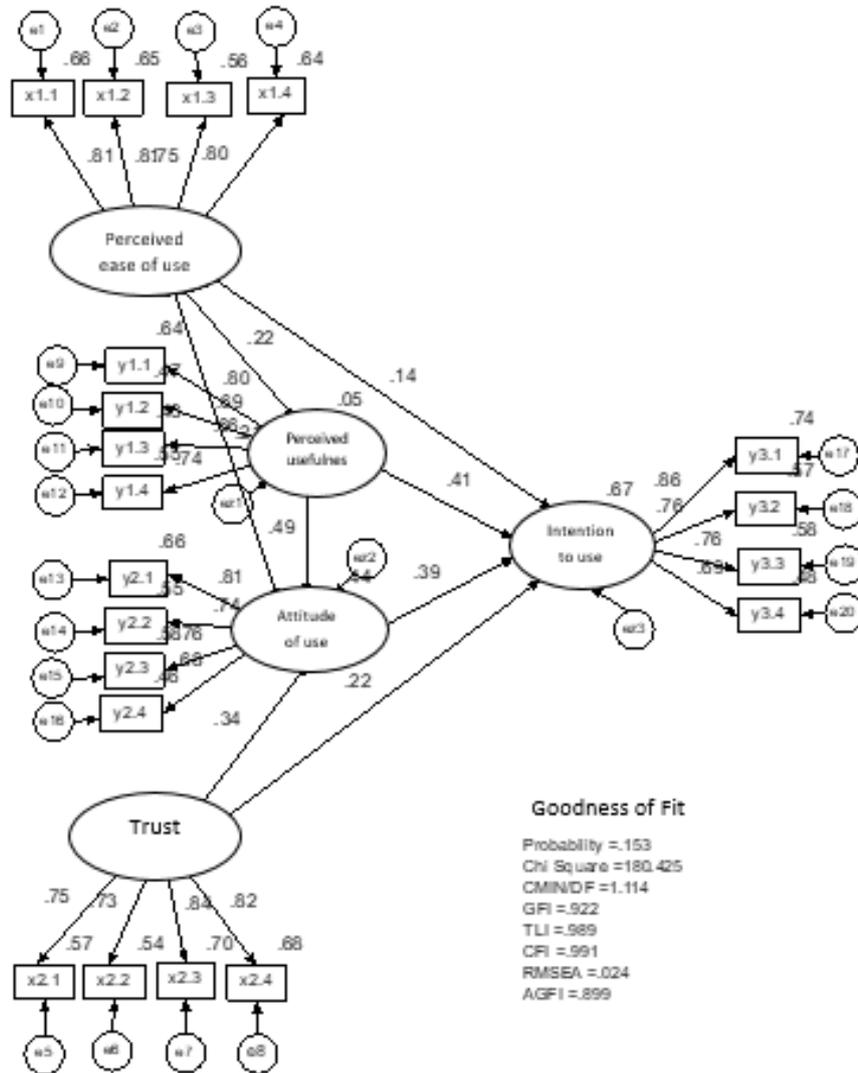


Figure 2 – Results of Estimated Structural Equation Models

DISCUSSION OF RESULTS

The estimation results of structural models as presented in Table 1 show that testing of this hypothesis produces a path coefficient (standardized direct effect) of 0.219 with a significance value (p) of 0.010. That is, that the construct of Perceived Ease of Use has a positive and significant effect on Perception of Benefits. These results are in line with several previous studies such as by Shroff et al. (2011) with the object e-portfolio system, research by Chang et al. (2011) in Taiwan, and in research by Sheikhi (2012) with the object of electronic banking research.

The estimation results of structural models as presented in Table 1 show that testing of this hypothesis produces a path coefficient (standardized direct effect) of 0.210 with a significance value (p) of 0.005. That is, that the construct of perceived usefulness has a positive and significant effect on attitudes to use. These results are in line with several previous studies such as the study in Kenya by Lule et al. (2012), in Iran by Sheikhi (2012), and Tan et al. (2012) in his research in Taiwan.

The estimation results of the structural model as presented in Table 1 show that the testing of this hypothesis yields a standardized direct effect of 0.487 with a significance value (p) of 0.000. That is, that the construct of Benefit Perception has a positive and significant effect on Attitudes to Use. These results are in line with other studies in several countries

such as Hong Kong (Cheng et al., 2006), Sudan (Tingari and Abdelraman, 2012), Taiwan (Tan et al., 2012), and Kenya (Njuguna et al., 2012).

The estimation results of the structural model as presented in Table 1 show that the testing of this hypothesis results in a standardized direct effect of 0.392 with a significance value (p) of 0.000. That is, that the construct of the attitude to use has a positive and significant effect on the intention to use. This result is in line with previous research by Venkatesh and Bala (2008).

The estimation results of structural models as presented in Table 1 show that the testing of this hypothesis results in a standardized direct effect of 0.409 with a significance value (p) of 0.000. That is, that the construct of benefit perception has a positive and significant effect on intention to use. These results are in line with the research of Rigopoulos and Askounis (2007) and Jayasingh and Eze (2010) conducted in Greece and Malaysia.

The estimation results of the structural model as presented in Table 1 show that the testing of this hypothesis yields the value of the path coefficient (standardized direct effect) of 0.138 with a significance value (p) of 0.025. That is, that the construct of perceived ease of use has a positive and significant effect on intention to use. These results are in line with research by Al-maghrabi and Denis (Safeena et al., 2011) and Wang et al. (Mayasari et al., 2011).

The estimation results of the structural model as presented in Table 1 show that the testing of this hypothesis yields the path coefficient (standardized direct effect) of 0.341 with a significance value (p) of 0.000. That is, that the construct of trust has a positive and significant effect on the attitude to use. This result is in line with other studies by Al-Ajam and Nor (2013) in Malaysia and significant and in London by Alsajjan and Dennis (2006).

The estimation results of structural models as presented in Table 1 show that the testing of this hypothesis yields a path coefficient direct effect value of 0.216 with a significance value (p) of 0.001. That is, that the construct of trust has a positive and significant effect on the intention to use. This result is in line with previous research by Mohan et al. (2013) in Malaysia, and Rahmawaty (2013) conducted in Indonesia.

RESEARCH LIMITATIONS

Based on the research that has been done, there are several limitations in this study, namely the scope of research is limited in Denpasar City, so the results of this study cannot be generalized to other consumers for a wider area. Research is only on Bank Negara Indonesia internet banking applications, not on banking products in general or comparing Bank Negara Indonesia internet banking applications with other banks. The research data is taken at a certain time (cross section), it is hoped that in the future it can use time series data or research with longitudinal data to produce better research

CONCLUSION AND SUGGESTIONS

Based on the results of the research and discussion that have been conducted, some conclusions can be drawn, namely the perception of ease of use has a positive and significant influence on the perception of the benefits of Bank Negara Indonesia internet banking. This positive effect means that if customer's perception of the facilities formed better, the perception of the benefits of using Bank Negara Indonesia internet banking in Denpasar City will be more confident. Perception of ease of use has a positive and significant effect on the attitude to use the Bank Negara Indonesia internet banking. This positive influence means that the better the perception of the ease of use of customers about the facilities formed, the more confident the attitude of customers in using Bank Negara Indonesia internet banking in Denpasar City. Benefit perception has a positive and significant effect on the attitude to use Bank Negara Indonesia internet banking. This positive influence means that the better the perception of customer benefits about the facilities formed, the more confident the attitude of customers in using Bank Negara Indonesia internet banking in Denpasar City. The attitude to use has a positive and significant effect on the intention to use

Bank Negara Indonesia internet banking. This positive influence means that the better the attitude to use customers is formed, the more confident the customers will be in using Bank Negara Indonesia internet banking in Denpasar City. Benefit perception has a positive and significant effect on the intention to use Bank Negara Indonesia internet banking. This positive influence means that the better perceptions of customer benefits are formed, the more confident the intentions of customers in using Bank Negara Indonesia internet banking in Denpasar City. Perception of ease of use has a positive and significant effect on the intention to use Bank Negara Indonesia internet banking. This positive influence implies that the better the perceived ease of use of the customer is formed, the more confident the intention of the customer in using Bank Negara Indonesia internet banking in Denpasar City. Trust has a positive and significant effect on the attitude to use Bank Negara Indonesia internet banking. This positive influence means that if the customer confidence formed better, the attitude of customers in using Bank Negara Indonesia internet banking in Denpasar City will be more confident. Trust has a positive and significant effect on the intention to use Bank Negara Indonesia internet banking. This positive influence means that if the customer confidence formed better, the more confident the intention of the customer in using Bank Negara Indonesia internet banking in Denpasar City.

Based on the results of the research, discussion, and conclusions that have been made, a number of suggestions can be drawn, namely for the company, BNI should continue to innovate in providing easy use of customers, add features that provide benefits for BNI customers, maintain the security of customer databases so as to make customer trust so that this will continue to increase the customer's intention to use BNI internet banking. Based on the results of the analysis on the characteristics of respondents, it is better for companies to prioritize marketing strategies for consumers in the age range of 18-28 years, female, bachelor's degree, and private employees. The advice that can be given is based on the respondent's answer to each variable, that is, it is better if the company Bank Negara Indonesia is more active in providing education to customers regarding the ease of using Bank Negara Indonesia internet banking. This can be done by means of education by opening stands at major activities. This step is done so that customers can more easily understand the features in internet banking and how to use them. It is better for the company Bank Negara Indonesia to be more active in providing understanding to customers about the benefits of Bank Negara Indonesia internet banking. This can be done by making a standing banner containing the benefits of internet banking at the office of Bank Negara Indonesia. This step is taken so that customers will easily obtain information about the benefits of Bank Negara Indonesia internet banking. It is better for Bank Negara Indonesia companies to be more active in educating about internet banking to make a positive attitude in using Bank Negara Indonesia internet banking. This can be done with the role of customer service to provide information and education about Bank Negara Indonesia internet banking so that customers have a positive attitude to use Bank Negara Indonesia internet banking. This step was taken so that customers have a positive attitude to use Bank Negara Indonesia internet banking. It is better for Bank Negara Indonesia companies to always maintain confidentiality and commitment so that Bank Negara Indonesia internet banking can be trusted by customers. This can be done by maintaining the security of Bank Negara Indonesia's internet banking transactions and maintaining the customer database. This step was taken so that the trust of Bank Negara Indonesia customers in using Bank Negara Indonesia banking internet banking. For further research, you should add indicators that are related to these variables and adapted to the conditions of the company and the intended respondent. In addition, further research should consider the characteristics of the sample by using clusters such as income, age, education so that the results of the study will be more specialized.

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THE ROLE OF SERVICE QUALITY AND CUSTOMER SATISFACTION: A CASE STUDY FOR APPLICATIONS OF GO-FOOD

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ABSTRACT

Current technological developments have made entrepreneurs to facilitate an effort to be known by many people. In the current era of technology, the community is greatly helped by the existence of various kinds of applications that facilitate their business. The desire of the community in obtaining the order is a matter of great concern to a technology company. Various kinds of facilities provided by the company will support Service Quality. This study aims to test whether Service Quality affects customer loyalty directly and indirectly through Customer Satisfaction. In this study, we will survey application users Go-Food by using a structured questionnaire. The sample used as many as 119 Go-food application users participated in this study. In this study revealed that Service Quality has a direct effect on Customer Satisfaction, which then directly affects Loyalty. Go-Food customer loyalty does not guarantee that Go-Food management only increases the quality of service to customers. To achieve Go-Food customer loyalty, Go-Food must ensure satisfaction from its customers, because of the many factors that can affect the satisfaction of Go-Food customers, the management of Go-Food must improve the quality of its services with various promotions or socialization activities. The data analysis method used is Structural Equation Modeling (SEM) by using 119 respondents as the study sample in 2019.

KEY WORDS

Service quality, loyalty, customer satisfaction.

The development of online businesses in Indonesia is very rapid; this indicates the era of utilization of information technology has begun to be recognized. Online business or commonly referred to as *E-Commerce* more and more in Indonesia this is due to the development of the internet and changes in consumer behavior. A change in community behavior in E- Commerce is a challenge for the company to meet the needs and desires of its customers. Consumer trust in online shopping is a problem that is difficult to control because it deals with consumer attitudes and behavior. The services provided by e-commerce companies are very influential on their consumers.

E-Commerce is said to be an information technology system for conducting various business activities such as selling goods or services between two or more organizations or between an organizations with one or more end customers through one or more internet networks (Martin et al, 1999). Consumer behavior in *E-Commerce* is also influenced by satisfaction in conducting online transactions and is the main indication for consumers to like shop products and is the main indication of the desire to reuse so that they become loyal customers. In measuring the use of information technology there are several theories that can be used *such as Theory of reasoned action (TRA)* from Fishbien & Ajzen (1975) stating that a person's behavior is an estimate of intensity and action where someone will use information systems and information technology if it is useful and improve its performance and vice versa that then further developed by (Sidharta & Boy Suzanto, 2015). In applications Go-Food or *E-Commerce* involve features of electronic funds transfer, electronic data interchange, and automated data system. In a marketing perspective, increasing the number of customers using the Go-Food application is inseparable from the presence of loyal go-food application developers. In addition, loyal Go-Food application users will also spread positive news by word of mouth by recommending Go-Food application services to other customers.

Some studies have found that there is consumer satisfaction in conducting online transactions which is indicated to have an influence on consumer trust, which in turn will

influence consumer attitudes in repurchasing and becoming loyal customers (Elvandari, 2011). In this case, understanding customer loyalty in Go-Food application services is important to develop effective strategies to maintain effective strategies to retain customers who use Go-Food services.

LITERATURE REVIEW

Service Quality is an assessment of the customer service delivery process. Thus the *Service Quality* evaluating means evaluating the production process services " (Bates and Hoffman, 1999, p.338). *Service Quality* is an absolute thing that must be owned by companies or agencies that offer services, because with the quality of service to consumers, companies or agencies can measure the level of performance that has been achieved.

There are five dimensions of service quality that can be used to evaluate the quality of services according to Valerie Zeithaml, A. Parasuraman, and Leonard Berry, namely:

- *Tangible* (tangible), which is in the form of appearance of physical facilities, equipment, employees, and material installed. This dimension describes the physical form and service that will be accepted by consumers. For example in restaurant services, the employees wear neat uniforms, a number of dining tables, and complete tableware.

- *Reliability* (reliability), namely the ability to provide promised services reliably and accurately. In a broad sense, reliability means that the company gives its promises about providing, solving problems and pricing.

- *Responsiveness*, namely awareness and desire to help customers and provide services quickly. This dimension emphasizes attention and accuracy when dealing with customer requests, questions and complaints.

- *Assurance* (certainty), namely knowledge, courtesy, and the ability of employees to generate confidence and trust. This dimension may be very important in services that require a high level of trust where customers will feel safe and secure.

- *Empathy* (empathy) that is caring, and personal attention given to customers. The essence of the empathy dimension is showing customers through the services provided that customers are special, and their needs can be understood.

According to Kotler and Keller (2009, p.164), «*Satisfaction reflects a person's judgments of a product's perceived performance (or outcome) in relationship to expectation*» which means satisfaction is a feeling of pleasure or disappointment resulting from a comparison of product performance with their expectations. If the performance fails to meet expectations, the customer becomes dissatisfied. If the performance is in accordance with expectations, the customer is dependent. The cause-effect relationship in this study is to reveal the effect of service quality on Go-Food customer satisfaction. The research approach used in this research is quantitative research methods. According to Sugiyono (2004, p.14), quantitative research methods emphasize the analysis of *numerical* data (numbers) processed by statistical methods. Quantitative approaches are usually carried out on inferential research and rely on conclusions on testing hypotheses.

In general, there are two main streams that define customer loyalty, the main stream defines customer loyalty as actual returns and recommends it to others. (Gede Mahatma Yuda Bakti & Sumaedi, 2013). According to Pearson, 1996, quoted in (Akbar and Parvez, 2009) piki pattern customers who have a positive attitude toward a product committed to reusing and recommend to others. When technology is easy to use, users will feel more comfortable and want to use the system, unlike when the technology is difficult to use, users will feel reluctant to use the system. Someone does shopping because they feel shopping is a fun thing and makes it a loyal customer, in other words, when we feel comfortable with a product, whatever weaknesses the product has we are able to accept it.

HYPOTHESIS DEVELOPMENT

This research model shows that *Service Quality* affects customer *loyalty* directly and indirectly through *Customer Satisfaction*. *Service Quality* and *Customer Satisfaction* is a key driver of customer *loyalty* (Gede Mahatma Yuda Bakti & Sumaedi, 2013).

In a previous study conducted by (Dahiyat, Akroush, and Lail, 2011) stated that the *Service Quality* and *Customer Satisfaction* have a positive effect on customer *loyalty* in various industries. A good and effective way of communication that smoothly takes the business to another level of success. Through proper communication, a convenient and seamless path built between service providers and the consumers (Mirza & Ali, 2017). Customer *loyalty* is seen as an actual act of repurchase and actual recommendation actions (Sancharan, 2011; Lai and Chen, 2010; Clemes et al., 2008; Zeithaml et al., 1996; Fornell, 1992). Empirically, previous research has confirmed that service quality and customer satisfaction have a positive effect on customer loyalty in various industries. (Dahiyat et al., 2011). Then the first hypothesis in this study is:

H1: Service Quality increases the influence on customers Loyalty.

According to research (Gede Mahatma Yuda Bakti & Sumaedi, 2013) found that the *Service Quality* Retained Earnings positively affect the *Customer Satisfaction* in services. Meet consumer demand as a level of customer achievement in providing service. If the level of satisfaction is fulfilled, then consumers feel happy and if the desire is not fulfilled, the consumers will be dissatisfied (Mirza & Ali, 2017). The most important and influential aspects of quality are service quality. With good service and effective communication makes the business more successful. According to research (wet et al, 2005 and lai & Chen, 2010) revealed that service quality has a positive effect on customer satisfaction. Then the second hypothesis in this study is:

H2: Service Quality increases the influence on Customer Satisfaction.

Customer Satisfaction is used as an evaluation after the purchase, where the performance of selected products and services meets or exceeds expectations before consumers buy. If the performance does not meet the consumer will feel dissatisfaction. If the performance meets the food, consumers will feel satisfaction (Mulyana & Prayetno, 2018) *Loyalty* is the final effect consumer purchasing, attitudes and intentions to return later to buy the product and the consumer also will provide recommendations to others (Fraering & Minor, 2013). The main factor in determining *Customer Satisfaction* is the customer's perception of the *Service Quality* of goods or service, and if is in accordance with what is expected by consumers, the service can be said to be good and create *Loyalty* customers. Then the third hypothesis in this study is:

H3: *Customer Satisfaction* increases the influence on *Loyalty*.

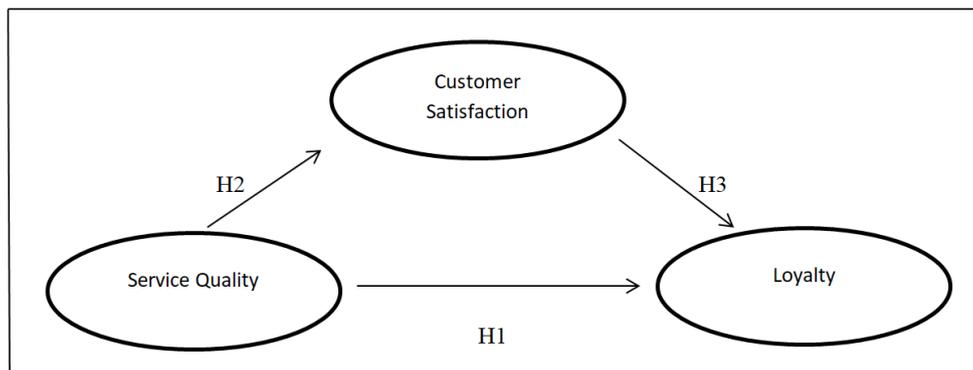


Figure 1 – Research model

METHODS OF RESEARCH

The study was conducted in January 2019 with the research method being descriptive analysis with a causality model to see the relationships between variables. The method of data analysis in this study uses *Structural Equation Modeling* (SEM) with Lisrel test equipment. The sampling process is done by using the entire population of Go-Food users and the number meets the requirements for the SEM method, which (Ferdinand, 2002) states that the number of representative samples to use SEM analysis techniques is 100-

200. The sampling technique is included in *non-probability sampling* which explains that the researcher takes a sample of a population whose information is unknown. The object of this research is Go-Food application users in the Jabodetabek area with a total population of 119 respondents. Yan g researched aspect is *Service Quality*, *Customer Satisfaction* and *Loyalty*. The data measurement method uses a *Likert* scale with one to five scale intervals where 1 "strongly disagrees" and 5 "strongly agree".

The Research uses one independent variable is *Service Quality* and two dependent variables namely *Customer Satisfaction* and *Loyalty*, but Quality of service also acts as a moderating *variable* that affects *Loyalty*. Variable which is referred to as the e I variant not observed, cannot be measured directly (Wen et al., 2005). So from that the author uses indicators called as observed variables to represent (Mac Lean and Gray, 1998). Each variable has dimensions to be measured in relation to each other. *Service Quality* variables have three dimensions, namely business services, product services, and service services. *Customer Satisfaction* Variables have four dimensions, namely satisfaction, dissatisfaction, meeting consumers, quality and services. Furthermore, *Loyalty* variables have three dimensions, namely recommendations, repurchases, and periodically. The three variables used in this study used 10 indicators that were modified from (Gede Mahatma Yuda Bakti & Sumaedi, 2013). All variables were measured according to a 5-point Likert scale, which ranged from 1- very disagree to 5- strongly agree. Furthermore, from the dimensions of the measurement displayed in the form of a questionnaire, then tested the validity and reliability test.

Validity test is carried out with *Confirmatory Factor Analysis* by looking at the value of *Kaiser-Meyer-Olkin Measure of Sampling* (KMO) and *Measures of Sampling Adequacy* (MSA). In this test the value obtained must be greater than 0.5, which means that the analysis of factors is appropriate or suitable for use, and can be further processed (Malhotra, 2004). When *Service Quality* consists of 9 questions and 2 of them are invalid so the remaining 7 questions, scale *Customer Satisfaction* envy of 6 questions and all valid and *Loyalty* scale consists of 4 questions and all of them valid. The reliability test of *Cronbach's Alpha* value is greater or equal to 0, 6 which means reliable. The next stage, the data is processed using the SEM analysis method.

RESULTS AND DISCUSSION

Foku's research is *Service Quality*, *Customer Satisfaction* and the influence of both on *Loyalty* and the role of service quality as a mediating variable between service quality and *Loyalty* where the results show that of the three hypotheses proposed, all data support the hypothesis or all hypotheses are accepted, as SEM testing has been done, and can be seen in Figure 2.

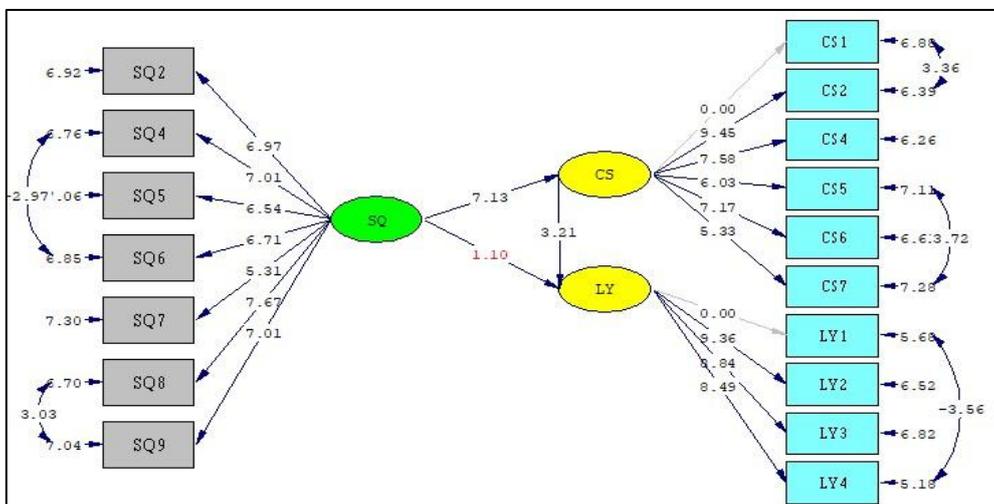


Figure 2 – T-Value Path Diagram

Table 1 – Hypothesis Testing Research Model

Hypothesis	Hypothesis statement	Value <i>T-Value</i>	Information
H ₁	<i>Service Quality</i> increases the influence of the customer on the customer <i>Loyalty</i>	1.10	Data does not support the hypothesis
H ₂	<i>Service Quality</i> increases the influence of <i>Customer Satisfaction</i>	7.13	Data supports the hypothesis
H ₃	H3: <i>Customer Satisfaction</i> increases the influence on <i>Loyalty</i>	3.21	Data supports the hypothesis

DISCUSSION OF RESULTS

Structural model analysis to test between latent variables and conceptual models of research. The results of testing hypothesis 1 found that analysis did not support. This is because the value of the *T-Value Service Quality* hypothesis increases the effect on *Loyalty*, which is less than 1.96 (< 1.96) which is 1.10. The results of the study revealed that quality services had indirect effects on customer loyalty. The results agreed with previous studies conducted by Gede (2013). Cronin and Taylor (1992) research in four industries (banks, pest control, dry cleaning, and fast food) showed that service quality did not significantly affect customer loyalty. In addition, the study of Ibanez et al. (2006) in the energy industry have also confirmed the same results. This result is also supported by the results of interviews with Go-Food application users who stated that the features contained in the application are still difficult to use and the promos given are also sometimes less attractive. This certainly affects the attitude of the customers to make loyal purchases, there needs to be an update or the latest update of the application features to make it easier to use the application for Go-Food users.

In addition, in testing hypothesis 2 it was found that the results of the analysis supported. This is because the value of the *T- Value hypothesis Service Quality* increases the influence of *Customer Satisfaction* is more than 1.96 (> 1.96) which is 7.13. This result supports previous a research also downloaded that affect *Quality Service Customer Satisfaction*. These results support the research conducted by Ajzen (1991) arguing that the resources and abilities possessed by humans can be a control for someone doing something or not doing something. He recognizes human perceptions of resources and the ability to perform certain behaviors as a variable "Behavior Control" (Ajzen, 1991). In the context of this study, customers who have Go-food user service quality are perceived to be high no longer need to come directly to traders because they have the ability / resources to use other service providers, namely internet / applications. In this condition, customers can consider service quality as a basic requirement or a relief factor that cannot be a competitive advantage for Go-Food customers when weather or conditions do not allow them to leave the room.

The results of testing hypothesis 3 found that the analysis supports. This is because the value of the *T- Value hypothesis Customer Satisfaction* increases the influence on *Loyalty* is more than 1.96 (> 1.96) which is 3.21. This result is supported by the research of Caruana (2002) in the banking industry found that customer satisfaction is a mediator variable of the relationship between service quality and customer loyalty. This proves that the features and services provided by Go-Food make customers satisfied and cause the desire to reuse and be loyal to be used at any time.

From the results obtained above, the researchers found that good service quality and facilitating customers from other features, promos, and support can influence customers to be satisfied in using the Go-Food application, with satisfaction the customer finally reuses and become a loyal customer.

MANAGERIAL IMPLICATIONS

This study revealed that *Service Quality* affect customer *Loyalty* indirectly through *Customer Satisfaction* in the Go-Food application service. This means that the *loyalty of*

users of the Go-Food application is not guaranteed if the *Service Quality* provided by Go-Food does not result in an increased Go-Food *Customer Satisfaction*. *Customer Satisfaction* does not only depend on *Service Quality*. Therefore, Go-Food management needs to identify other things that can affect the satisfaction of Go-Food users, such as providing various promos, giving cash-back, and giving attractive prizes for every purchase, as well as updating hits.

Go-Food needs to pay attention to these things, because the satisfaction and loyalty of users of an application is important and often considered by application users and customers (Kim, 2003). Then things that need to be improved again for good quality are by minimizing cheating on driver partners, where many cases occur when orders are ordered and not delivered to customers, this is very detrimental to customers, Go-Food must respond quickly to the case and are given sanctions for partners who commit violations.

CONCLUSION

Loyalty is greatly influenced by service quality and customer satisfaction. This study proves that the attitudes and behaviors of consumers in making a purchase through the Go-Food influenced by the quality of service and consumer butterfly on Go-Food. Thus it can be said that both before (At-checkout Satisfaction) and after (After-Delivery Satisfaction) do Online purchases influenced by service quality on the Go-Food application have a significant effect on the attitude and behavior of Go-Food users. Go-Food can succeed optimally, so it is recommended to maintain consumer confidence well and increase the role of the transaction process by constructively making improvements to Go-Food so that Go-Food actors, especially UMKM business players, use technology through Go-Food can increase sales more optimally.

The limitations of the study refer to several weaknesses in this study. Some of the limitations found in this study are:

- This research is only done in the e-commerce industry by taking research objects in the Go-Food food delivery application;
- This study only addresses the influence of customer satisfaction and loyalty to service quality;
- The inconsistency of the respondents' answers in answering the questionnaire (questionnaire) and working conditions which made the respondents not comfortable enough when answering the questionnaire (questionnaire) submitted to them;
- The form of a digital questionnaire, making some respondents over 40 years old quite difficult in the filling process.

Based on the results of this study where the quality of service and customer satisfaction affect loyalty, and the number of loyalty itself affects the level of effectiveness and efficiency of service quality. So it is very important to increase customer satisfaction and loyalty from Go-Food users. In addition, there are a number of researchers' notes, namely:

- The results of the research show especially loyalty from Go-Food customers is not good enough;
- Although the average age of students, but the commitment of employees to service quality has not been built. This should be a note for the Go-Food management;
- Go-Food management is expected to pay more attention to customer satisfaction. it is advisable for future research to add other variables to the development of research. It is expected that the results of this study can be used to provide optimal benefits for the object of subsequent research; this study can also be used as a comparison material in subsequent studies and should take research data on the broader object of research.

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TECHNICAL EFFICIENCY OF RICE FARMING DURING RAINY AND DRY SEASONS IN NGAWI DISTRICT OF EAST JAVA PROVINCE, INDONESIA

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ABSTRACT

The Aims of this study is to analyze the level of technical efficiency of rice farming in the rainy and dry seasons in Ngawi Regency, East Java Province. And compare the level of technical efficiency in the rainy and dry seasons. Respondents in this study were 88 rice farmers. Data analysis method used is Data envelopment analysis to obtain the level of technical efficiency of farmers and the average difference test (t test) to compare the level of technical efficiency in the rainy season and dry season. Tobit regression to analysis factors that influence technical efficiency. The results show that in the dry season farmers have higher technical efficiency than the rainy season. Similarly, the results of the average difference test (t test) show that the dry season has a higher average value of technical efficiency compared to the rainy season with a significant level of 1%. Field schools, farmers group, distance of plants, seed quality and season have a significant effect on the technical efficiency. This implies that there needs to be an increase in knowledge related to rice farming in the rainy season so that it can improve the technical efficiency and productivity of rice farming in the rainy season.

KEY WORDS

Rice farming, technical efficiency, rainy season, dry season.

The technical efficiency of rice farming has an important role in maintaining domestic food security and also enhancing agricultural development in Indonesia. Rice is the staple food consumed by most Indonesians and per capita consumption shows that it is higher than neighboring countries (Heriqbaldi, *et al.*, 2015). Besides that, Indonesia is known as the world's number three rice producer, which is as much as 70.8 million tons after China and India namely 206.5 million tons and 153.8 million tons, respectively. The contribution of Indonesian rice production to world rice production is 9.76%. However, Indonesia is still the world's fourth largest rice importing country after China, the Philippines and Bangladesh, respectively: 2.5; 1.9; 1.3 and 1 million tons (FAO, 2015). This phenomenon occurs because there is still a lack of domestic rice supply, and also due to the relatively high rice consumption of the Indonesian population, because the development of the population is very high and the consumption of per capita is also very high, reaching 98 kg / capita / year (BPS, 2015). Therefore the government must continue to strive to make rapid efforts to achieve rice self-sufficiency. One effort that needs to be done is by increasing the technical efficiency of rice farming in Indonesia.

Research on technical efficiency in increasing the productivity of rice farming has been carried out. One of them is research conducted (Parichatnon *et al.*, 2016) in Thailand. The results showed that the relatively high level of technical efficiency in their production and environmental factors had a significant effect on technical efficiency. Previous research was also conducted by (Boubacar *et al.*, 2016) the results show that rice producers in southwest Niger can reduce their inputs by 52% and still produce the same level of rice production. The results obtained indicate that the average rice farmer can still reduce the input they use by 52% with the same amount of output, so that it can be technically efficient. Tobit regression

shows that land area, experience, cooperative membership, main work and land ownership have a significant influence on technical efficiency. Ismail, Idris, Hassanpour (2013) researching the technical efficiency of rice farming in Malaysia by using a comparative analysis between VRS assumption Data Envelopment Analysis (DEA) and Stochastic Frontier Analysis (SFA). Input variables used are land area, seed costs, fertilizer costs, and the amount of labor, and pesticides. While the output variable used is rice production. The results of the analysis show that the average value of technical efficiency with DEA is 56 percent, this value is lower than the results of SFA which reached 69 percent. However, the results of several studies that have been carried out cannot be implemented in various seasons, such as the wet season and the rainy season. Because the level of technical efficiency of farming has a difference in each season. Therefore this study tries to fill the gap.

This study attempts to analyze the level of technical efficiency of rice farming in Indonesia with the Data Envelopment Analysis (DEA) approach in the rainy and dry seasons and compare the level of technical efficiency in both seasons. So that this research can be implemented in both seasons, especially in Indonesia.

LITERATURE REVIEW

Technical efficiency is the ability to avoid waste by producing as much output as possible with existing inputs and technologies or by using fewer inputs with the same technology will produce the same output. So that technical efficiency is using input as little as possible or producing as much output as possible. The producer is technically efficient if the increase in output is obtained through reducing at least one other output or increasing at least one input and if the decrease in an input is obtained through increasing one other input or decreasing at least one output. Therefore, producers who are technically efficient will be able to produce the same output with at least one fewer input or or using the same input will be able to produce at least one more output.

Technical efficiency is related to the ability of a company to produce on the isoquant frontier curve. Kumbhakar (2002) states that technical efficiency is the ability to minimize the use of production inputs a particular output vector or the ability to achieve maximum output from a particular input vector. A farmer is technically said to be more efficient than other farmers if the use of the same type and amount of inputs produces higher physical output.

Technical efficiency is associated with behavioral objectives to maximize output (Battese and Coelli 1995). Farmers are called technically efficient if they have produced at the level of production limits where this cannot always be achieved due to various factors such as bad weather, the presence of plant disturbing organisms or other factors that cause production to be below the expected limit (Battese and Coelli 1995).

The Data Envelopment Analysis (DEA) method was created as a performance evaluation tool for an activity that requires one or more types of inputs and produces one or more types of output. Measurements are simply expressed by the ratio between output to input which is a unit of measurement of efficiency or productivity that can be expressed parsia, for example output per hour, output per worker, etc., (Bambang, 2006). Example of the output of an entity: the proceeds of the sale of one or more types of goods, the production of an agricultural commodity (rice, corn, soybean, cabbage, carrots, bananas, durian etc.), profit of the company, profits from agricultural commodities and others) or in total (involving all outputs and all inputs of an entity into measurements) that can help show what input factors are most influential in producing an output. It's just that expanding the measurement of productivity from partial to total will bring difficulties in choosing what inputs and outputs should be included and how they are weighted (Cooper, 2002). The use of fixed weights that are applied uniformly to all inputs and outputs of the evaluated entity is known as the concept of "Total Factor Productivity" in the economy; this concept is contrary to the use of variable weights based on the best possible size for each entity evaluated in the method DEA (Cooper, 2002).

METHODS OF RESEARCH

Determination of location is purposively with consideration the area is a center for rice commodities in East Java, both irrigated rice fields and rice plantations IP-300. Based on these considerations, the research location was chosen in Ngawi Regency.

The data used in this study are primary data and secondary data. The primary data collected from the results of interviews with farmers are data on farming carried out by farmers in dry and rainy season of 2016. The respondents used in this study were farmers who cultivated rice on technical irrigated rice fields with rice-paddy-rice cropping patterns (IP-Rice 300) in 2016.

The data collected included respondents' socio-economic conditions, farm performance, use of production inputs, farm income, farmer membership in agricultural programs and other information. The data is used to determine the level of efficiency and the factors that influence the technical efficiency of rice farming.

DEA method is a non-parametric method as a work evaluation tool for an activity that requires one or more inputs and produces one or more types of output, using linear program models as a method of measuring efficiency. The measurement is simply stated by the ratio of output to input which is a unit of measurement of efficiency or productivity that can be expressed partially (Cooper et al. 2006). Furthermore, Cooper et al (2006) explained that the DEA method uses technical mathematical programs that can handle many variables and constraints. In addition, the DEA method does not limit of inputs and outputs to be chosen because the techniques used can overcome them. Example of the output of an entity, such as the sale of one or more types of products, the production of an agricultural commodity, company profits, agricultural commodity farming profits etc.) or in total (involving outputs and inputs on an entity into measurements) which can indicate what input factors most influential in producing an output.

DMU (Decision Making Unit) is an organization or entity that will measure of efficiency relatively to a group of other homogeneous entities. Homogeneous means that the input and output of each DMU evaluated must be the same or similar. The DEA approach uses weighting that is fixed on all inputs and outputs of each DMU evaluated. The use of fixed weights that are applied uniformly to all inputs and outputs of the evaluated DMU is known as the concept of Total Factor Productivity. The concept of DEA was first carried out by Farrell (1957) and developed by Charnes, Cooper, and Rhodes (1978) known as the CCR model. In the CCR model the assumption used is a constant return to scale (CRS). The CRS assumption requires that a DMU be able to add or reduce input and output variables linearly without experiencing an increase or decrease in the value of efficiency. In its development, DEA experienced a modification that was first introduced by Banker, Charnes, and Cooper (1984), known as the BCC model. In the BCC model the assumption used is return to scale (VRS) variable. The VRS assumption is different from CRS, where VRS does not require changes in the input and output of a DMU to take place linearly, so increasing returns to scale and decreasing return to scale efficiency values (Cooper et al. 2006).

The CRS assumption is more appropriate when all DMUs work on an optimal scale. Whereas, the assumption of VRS is used when not all DMUs are on an optimal scale. Another difference between CRS and VRS is the calculation of the value of variation in efficiency with the size of the DMU scale. The assumption of VRS, DMU can be compared with another DMUs that are larger or smaller. This is not applied to the CRS assumption. Calculation of technical efficiency with the VRS model will obtain the value of efficiency scale in each DMU. The efficiency scale value of DMU can be calculated as the ratio between efficiency with the assumption of CRS or VRS from DMU. A DMU will be inefficient if there are differences in the value of CRS and VRS technical efficiency. In addition, it will be inefficient if the DMU only has pure technical efficiency, where the same efficiency value between CRS and VRS is ensured that the value of technical efficiency is smaller than one.

The model approach in this study is Data Envelopment Analysis (DEA). DEA is a work evaluation tool for an activity that uses one or more input types and produces one or more types of output. Cooper et al (2006), defines DEA in a simple measurement expressed by the

ratio between inputs to output and then can be expressed partially. The activity observed in the DEA model is to compare the input and output of each decision making unit (DMU) or decision-making unit. Each DMU will reflect diversity because of differences in the use of input combinations to produce different outputs. Comparison of input and output in the DMU is done to get an efficiency score. In this study, if the efficiency value is equal to one, then rice farming is relatively efficient. However, if the efficiency value is less than one, then rice farming is relatively inefficient.

There are several assumptions about using the DEA model according to Cooper et al (2006), namely the use of input and output results is a variable in the study, all decision making units (DMUs) must have the same input and output variables so that they can be analyzed, each DMU has a different choice of size and input to maximize efficiency individually, all input and output variables for each DMU are positive (> 0), and DEA is used as an analytical tool to measure performance at each DMU. The steps of work research using the DEA method according to Cooper et al (2006), namely identifying DMU observed with predetermined input and output variables and calculating efficiency values for each DMU to obtain the input and output variables that should be in order to achieve optimal performance. Farmers as decision-making units have control of the inputs used compared to the output produced, so that the DEA model in this study is oriented towards input variables. DEA model approach Variable Return to Scale is more appropriate to use. The equation of the VRS model is:

$$\begin{aligned} & \text{Min } \theta, \lambda \\ \text{st } & -y_i + Y \lambda \geq 0 \\ & \theta x_i - X \lambda \geq 0 \\ & N \mathbf{1}' \lambda = 1 \\ & \lambda \geq 0 \end{aligned}$$

The assumption of this model is the ratio between the addition of input and output is not the same (variable return to scale). That is means, changes of the input and output of a DMU take place in a linear manner, so that permissible increases (increasing returns to scale / IRS) and decreasing returns to scale / DRS value of efficiency. So, this method involves multi input analysis, multi output, and variable return to scale. Input variables used were rice seeds, NPK fertilizer, urea fertilizer, SP-36, solid insecticides, liquid insecticides, and labor (labor in the family and labor outside the family). Meanwhile, the output variable used in this study consisted of rice production and rice productivity.

Tobit regression assumes that the variables are not free censored, only independent variables are unlimited. All of free and non-free variable, were measured correctly so that there was no perfect autocorrelation, heteroscedasticity, and multicollinearity and using the right mathematical model (Gujarati dan Dawn 2009). The Tobit regression model has several advantages, such as determine the intensity of factors that affect technical efficiency on farming, check the consistency of DEA results and identify explanatory variables (Cooper et al. 2006), and the influence of external variables on the production process can be tested both in terms of sign and significance (Gujarati dan Dawn 2009). The value of level technical efficiency with DEA analysis produced in this study is 0.00 to 1.00, where the use of tobit regression will explain the relationship between the level of technical efficiency with the characteristics of the respondent farmers. The factors that influence technical efficiency are adjusted to the conditions of the respondents in the research location. The factors that are thought to influence the technical efficiency of rice farming, namely age, education, rice farming experience, number of family dependents, field schools, Farmers group, planting jark, seed quality, land ownership status and season. The tobit model used in this study is as follows:

$$TE = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10} + \varepsilon$$

Where: Dependent variable is Value of Technical Efficiency (TE) and the independent variables are age (X1), education (X2), experience of farming (X3), number of family dependents (X4), field school (X5), farmer group (X6), crop planting (X7), quality seed (X8), land ownership status (X9) and season (X10).

RESULTS AND DISCUSSION

Table 1 shows the differences in output and the use of dry season and rainy season inputs. Rice production in the dry season has a higher number than the rainy season. Besides that the highest difference in input use is the use of organic fertilizers where the use of organic fertilizers in the dry season is much higher than the rainy season. Interestingly, the average use of chemical fertilizers such as SP, Phons, and ZA during the rainy season is higher than the dry season.

Table 1 – Descriptive statistics

Variable	Rainy season		Dry seasons	
	Mean	St.Dev.	Mean	St.Dev.
Output	6047.98	1111.58	6988.76	1048.02
Seed (Kg)	42.4546	11.7854	41.4091	13.456
Organic fertilizer (Kg)	792.705	954.559	1033.66	789.151
Urea (Kg)	255.148	85.2526	258.78	51.9214
SP 36 (Kg)	154.057	51.4172	137.419	22.6718
Phons (Kg)	248.705	80.6014	239.681	64.2037
ZA(Kg)	165.852	64.9032	160.994	39.6013
Leaf Fertilizer (Kg)	2.88296	4.66701	2.90682	1.6435
Solid Pesticides (Kg)	1.56023	0.90802	1.84318	1.26398
Liquid Pesticides (l)	1.95568	1.64477	1.91364	2.12809
Labor (working hours)	88.8102	22.1517	108.638	27.447
Irrigation (hour)	64.6591	42.0169	202.807	58.7251

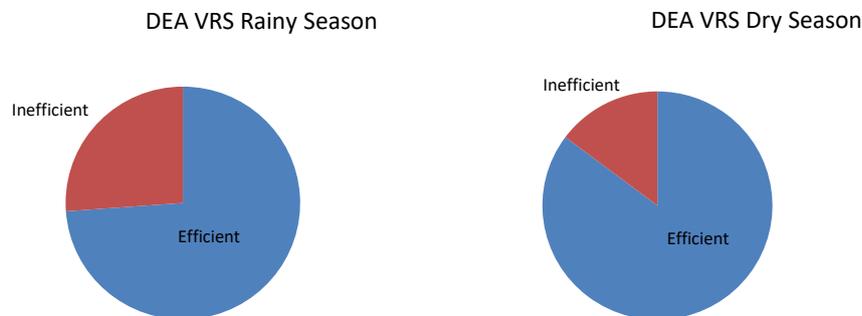


Figure 1 – Technical Efficiency of the Rainy Season and Dry Season, %

The results of the Data Envelopment Analysis (DEA) show that in the dry season technically efficient farmers of 85% while farmers who are technically inefficient at 15%. In the other hand, during the rainy season it shows that farmers who are technically efficient are 74%, while farmers who are technically inefficient are 26%. The average level of technical efficiency of rice farming in the dry season and rainy season can be carried out in table 2. Where the dry season has an average of 0.994 while in the rainy season has an average of 0.978. This shows that the level of technical efficiency of rice farming in the dry season is higher than in the rainy season.

Table 2 – Average technical efficiency

Season	Average technical efficiency
Dry season	0.994
Rainy season	0.978

The results of different mean tests of technical efficiency of rice farming between the dry season and the rainy season can be see in the following table:

Table 3 – Test for Technical Efficiency Season 1 & Rainy Season

Variable	Dry Season 1		Rainy season		Significance
	Mean	Std. Dev.	Mean	Std. Dev.	
Technical Efficiency	0.9943295	0.0166862	0.9775114	0.0486975	0.0028***

Source: Primary data processed (2018).

From the results of the analysis of the difference mean test we can see that the technical efficiency of rice farming in season 1 and the rainy season has a significant difference. Where the level of technical efficiency in the dry season 1 has a higher level of technical efficiency with an average of 0.9943295 compared to the level of technical efficiency in the rainy season. This is because the use of inputs in the rainy season can still be reduced without changing rice production. this is in line with the research conducted by Coelli & Battese (1996), where the level of technical efficiency of rice farming is strongly influenced by seasonal conditions. Besides that, the season is one of the factors that greatly affect the success of farmers in conducting farming, especially in the allocation of farmers in the use of rice farming inputs.

Based on the results of tobit regression analysis, can be seen that the variables of field schools, Farmers group, distance of plants, seed quality and season have a significant effect on the dependent variable (technical efficiency). Furthermore, the variables of age, education, experience, family dependence, land ownership status did not significantly effect on dependent variable, namely technical efficiency. More detail each variable effect to technical efficiency are as follows.

The field school has a positive and significant effect at the level of 1% to technical efficiency, its means the participation of farmers in field schools can improve the technical efficiency of rice farmers. Because in the field school activities the theory and practice of how to do rice farming will be given. The results of this study are in line with the findings of Linh *et al* (2017); Xiao *et al* (2015).

Table 4 – Factors that Influence Technical Efficiency

Variable	Coef.	Std. Err	T	P> t
Age	-0.00016	0.00032	-0.500	0.617
Education	0.001345	0.001131	1.190	0.236
Experience	0.000161	0.000284	0.570	0.572
Family Dependence	0.002565	0.002586	0.990	0.323
Field school	0.010737	0.003007	3.570	0.000***
Farmers Group	0.018072	0.009381	1.930	0.056**
Space of Plant	0.008984	0.004491	2.000	0.047**
Seed quality	0.040121	0.006385	6.280	0.000***
Land ownership status	-0.00374	0.007005	-0.530	0.594
Season	0.01762	0.004048	4.350	0.000***
_cons	0.894521	0.021704	41.210	0.000
var(e.efisiensi)	7.07E-05	0.000536	0.000817	
Log likelihood = 392.28273				
Number of obs = 176				
LR chi2 = 121.13				
Prob > chi2 = 0.0000				
Pseudo R2 = -0.1641				

Description: * = significant 10%. ** = 5% significant. *** = significant 1%.

Farmers group have a positive influence on the level of technical efficiency. The Farmers who join to Farmers group have a higher value of technical efficiency, because Farmers group are one of the facilities for farmers to increase their productivity. This result is in line with previous research, where participation in Farmers group has positive and

significant effect on the efficiency of rice farming (Narendar *et. al.*, 2018); (Asmara R. *et. al.*, 2016)

Spacing of plant variable has a positive and significant effect at the level of 1% to technical efficiency, where the farmers who pay attention to their spacing, their technical efficiency will be higher. This is in accordance with conditions in the field where farmers who pay attention to spacing of plant have higher rice production than farmers who do not pay attention to the spacing of plant.

Seed quality variable has a positive and significant effect at the level of 1% on the technical efficiency of rice farmers. This implies that good seed quality will improve the technical efficiency of rice farming because the quality of seeds used to determine the quality and quantity of rice production, This result is in line with Kurniawan's (2015) that, seed quality has a positive influence on the technical efficiency of rice farmers.

Season variable has a significant influence at the level of 1% on the level of technical efficiency. Dry season, the level of technical efficiency of rice farmers tends to be higher than the rainy season this is in line with the expression of Coelli & Battese (1996) where season is one of the factors that greatly influence the success of farmers in conducting farming, especially in allocating farmers to the use of farm inputs rice.

CONCLUSION

The results of the discussion that has been explained, it can be concluded that the dry season has an average of 0.994 while in the rainy season has an average of 0.978. The dry season has a higher level of technical efficiency than the rainy season. On the other hand field schools, Farmers group, distance of plants, seed quality and season have a significant effect on the technical efficiency. Furthermore, the variables of age, education, experience, family dependence, land ownership status did not significantly effect on dependent variable, namely technical efficiency.

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THE ROLE OF THE HUMAN AND STRUCTURAL CAPITAL, INTELLECTUAL CAPITAL AND BUSINESS PERFORMANCE

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ABSTRACT

This study aims to determine the relationship of the implementation of Intellectual Capital to Business Performance on the manufacture company in the province of Banten. Especially purpose of this research is to know the relationship of the Human Capital with Customer Capital, to know the relationship of the Human Capital with Structural Capital, to know the relationship of the Customer Capital with Business Performance, to know the relationship of the Structural Capital with Business Performance. The sample is that used in this research are 46 manufacturing companies on the province of Banten, and the unit of analysis are Finance Manager, Human Resource Development Manager, and Production Manager. Data is that obtained in this research is the primary data with the research instruments such as questionnaires. This research uses Partial Least Square as a means of testing the hypothetical with the Outer and Inner Model. The processing of data was found that the results of the questionnaire as the primary data which represent each variable have level of good reliability that is above 0.5. Similarly, internal consistency between the independent variables and dependent variables have a both of good validity value is greater than 0.7. For test hypothetical got results that Human Capital associated with significant positive Customer Capital, which is evidenced by the t-statistics are greater than the t-table that is on the $4.053 > 1.96$. Human Capital associated with significant positive Structural Capital, which is evidenced by the t-statistics are greater than the t-table that is on the $7.925 > 1.96$. Customer Capital has a significant positive relationship to the Business Performance, which is evidenced by the t-statistics are greater than the t-table that is on the $5.664 > 1.96$. Structural Capital associated not significantly positive to the Business Performance, which is evidenced by the t-statistic is less than the t-table that is on the $1.075 < 1.96$. Last Intellectual Capital is a significant positive relation with the Business Performance, which is evidenced by the t-statistics are greater than the t-table that is on the $5.436 > 1.96$.

KEY WORDS

Intellectual capital, human capital, structural capital, customer capital, business performance.

In the era of globalization, technological innovation and intense competition forced companies to change the way they run their business. In order to continue to survive quickly companies change from a business based on labor (labor-based business) towards a knowledge based business (business based on knowledge), with the main characteristics of science. The increase in the value of capitalization shares are quite high and the difference between the book value of capitalized stocks on knowledge based industries the "missing value" in the financial statements by Stewart (1997) later referred to as intellectual capital. Stewart (1997) in Dwi and Arifin (2005) shows the ratio of book value to market value of shares contained in the balance sheet on a knowledge-based company is 1:7, while in service companies 1:1. According to Stewart (1997) of such difference because there intangible asset yang not recorded in the balance sheet by the company.

The company's inability to record intangible assets on its balance sheet due to accounting standards that exist today have not been able to capture and report on the investment incurred in obtaining the resources. Non-physical resources that can be captured

and reported in accordance with accounting standards currently only limited investment in forms of intellectual property.

Conventional accounting systems do not allow the company to capitalize on intangible assets and reported as other assets. So that the financial statements are no longer sufficient for an assessment of the performance and potential value of the company. Thus, accounting is also believed to have not been able to do the recognition and measurement of intellectual capital, because the accounting tends to focus on the assets that are real (hard assets) alone. Even if there are intangible assets are recognized and measured in the financial statements, most of them are based on the historical value (historical cost) instead of its potential to add value (Stewart, 1997) in Dwi and Arifin (2005)

The limitations are a challenge for management accounting and financial accounting. Accounting management requires new tools for managing the investment expertise of employees, to measure the return on investment skills of employees, and information and technology in the long term (IFAC, 1998). While financial accounting requires accounting measurements are not the same between the enterprise with one another to show indicators of intellectual capital, and in need of new measurements that are not based on monetary (Upton, 2001) in Partiwi and Arifin (2005).

Such challenges arise because at this time, the dominant factor in the assessment of a company, especially for high technology companies and professional service is the intellectual capital (Pike, Rylander & Roos, 2002). Therefore, although it is still not possible to give the monetary value of the intellectual capital, but intellectual capital should be considered that the value creation process easy to understand.

Implementation of intellectual capital is something new, not only in Indonesia but also in the global business environment, only a few developed countries that have begun to implement this concept, for example, Australia, the United States and the Scandinavian countries. In addition, in determining the guidelines on measurement Intangible conducted by researchers at the European institutions such as NORDIC, DATI, and MERITUM also not been able to formulate a similar concept to it. But the companies they studied still report as a Voluntary Intellectual Capital Report (Toma's and Ramo'n, 2007).

In Indonesia, according to (Abidin 2000) in Ulum (2008) intellectual capital is still not widely known. In many cases, up to now have companies in Indonesia tend to use conventional business based in the building, so that the resulting product is still poor technological content. Besides, these companies do not pay more attention to human capital, structural capital, and customer capital. Yet all of these are elements of the company's intellectual capital builder

Based on the above, the researchers tried to re-examine the relationship between the application of Intellectual Capital elements consisting of Human Capital, Customer Capital and Structural Capital on Business Performance in the manufacturing companies located in the province of Banten. For this study, entitled "Relationship Analysis Application of Intellectual Capital on Business Performance: Empirical Research on Manufacturing Company in Banten Province".

A problem to be examined in this study can be identified as follows:

1. How is the relationship of the Human Capital Customer Capital in manufacturing companies in the province of Banten;
2. How is the relationship of the Human Capital Structural Capital in manufacturing companies in the province of Banten;
3. How is the relationship to the Business Customer Capital Performance in manufacturing companies in the province of Banten;
4. How Structural Capital relation to the Business Performance in manufacturing companies in the province of Banten;
5. How is the relationship consisting of Intellectual Capital Human Capital, Customer Capital, Structural Capital and Business Performance in manufacturing companies in the province of Banten.

Based on the identification of the problem above, the purpose of this study was to obtain empirical evidence about:

1. Customer Relationship Human Capital to Capital on manufacturing companies in the province of Banten.
2. Relation to Structural Capital Human Capital in manufacturing companies in the province of Banten.
3. Customer Relationship Capital and Business Performance in manufacturing companies in the province of Banten.
4. Structural Relationship Capital and Business Performance in manufacturing companies in the province of Banten.
5. Relationships Intellectual Capital consists of Human Capital, Customer Capital, Structural Capital and Business Performance in manufacturing companies in the province of Banten.

With the research is expected to provide benefits such as:

Company. Can provide a practical contribution to the company in the management of Intellectual Capital for corporate decision making. Serta into consideration for companies, especially those in Banten province to determine its policy on the application of Intellectual Capital in conjunction with the Business Performance.

Investor. For consideration and performance measurement information in business organizations and also the planting stock was going to do with these companies see the Business Performance

Creditor. For your consideration, and the information in the provision of loan funds will be provided by looking at the application of Intellectual Capital of the company.

Usability Sciences Development:

- a. Are expected to contribute in the form of a reference for management accounting, in particular those relating to the measurement of the performance of the business organization, the theory of accounting and financial accounting, primarily related to the theory of the intellectual capital, the discussion of intangible assets preparation of Statement of Financial Accounting Standards (SFAS) with respect to the existence of intellectual capital;
- b. Expected to be used as material for further research in the development of knowledge concerning discussion of Intellectual Capital;
- c. For authors - to determine the relationship consisting Intellectual Capital Human Capital, Customer Capital, Structural Capital and Business Performance.

LITERATURE REVIEW

Understanding Intellectual Capital by Sawarjuwono (2003):

"Intellectual capital can be defined as the sum of what is produced by the three main elements of the organization (humancapital, structural capital, customer capital) related to the knowledge and technology to provide more value for the company in the form of competitive advantage of the organization".

Some definitions of intellectual capital are summarized and quoted in Partiwi and Arifin (2005) are as follows:

- a. Intellectual capital is exclusive, but once discovered and exploited will give the organization a new resource base to compete and win (Bontis, 1996).
- b. Intellectual capital is a term given to a combination of intangible assets from the market, intellectual property, infrastructure and human centers that make a company can function (Brookings, 1996).
- c. Intellectual capital is intellectual material (knowledge, information, intellectual property, experience) that can be used to create wealth. It is a collective sense force or set of knowledge that is useful (Stewart, 1997).
- d. Intellectual capital is the effective utilization of knowledge (the finished product) as oppose to information (raw materials) (Bontis, 1998).
- e. Intellectual capital is considered as an element of the company's market value and also the premium market (Olve, Roy & Wenter, 1999).

Human capital is the knowledge, skill, and experience brought employees when leaving the company (Starovic & Marr, 2004) which includes the individual's knowledge of an

organization (Bontis, Crossan & Hulland, 2001) generated through competence, attitude and intellectual intelligence (Roos, Roos, Edvinsson and Dragonetti, 1997), in Dwi and Arifin (2005).

In industries based on knowledge, human capital is a major factor for these resources is the dominant cost in the production process of the company, so we can say if all employees in the company then the company will no longer have value. Resources are what will support the creation of structural capital and customer capital which is the core of intellectual capital.

Sawarjuwono (2003) states that "Structural capital is the ability of an organization or company to meet the routine of the company and the structure that supports employee efforts to produce intellectual performance is optimal and overall business performance, for example: systems operations, manufacturing processes, organizational culture, management philosophy and all forms of intellectual property owned by company. An individual can have a high intellectual level, but if the organization has systems and procedures that bad then intellectual capital can achieve optimal performance and potential cannot be fully utilized".

Structural Capital includes the company's ability to reach the market (Petras, 1996) in Widianingrum (2004) or the hardware, software and other supporting companies (Bontis, 2000) in other words the infrastructure supporting employee performance. Structural Capital is a link human capital into intellectual capital. That is even though employees have high intellectual, but if not supported by adequate means to apply their innovations, the ability will not generate Intellectual Capital.

According Sawarjuwono (2003), Capital Customer element is a component of intellectual capital that provides real value. Definition of Customer Capital according Sawarjuwono (2003) is: "Customer Capital is a harmonious relationship / association network owned by the company with its partners, both from suppliers and reliable quality, comes from customers loyal and satisfied will the service company concerned, derived from the company's relationship with the government and with local communities. Relational capital may be emerging from different parts of the environment outside companies that can add value for the company".

Customer capital demonstrate the potential of the company since ex-firm intangible (Bontis, 1999), in Dwi and Arifin (2005). Another understanding of Customer Capital is the knowledge of a series of markets, customers, suppliers, relations between government and industry (Bontis, 2000) or a good relationship with outsiders (Petras, 1996) in Widianingrum (2004). So the company had to create goods and services are different and have more value in the eyes of consumers

According to Fuad (2003: 1), in his book defines business as follows: "Business is an activity that cannot be separated from the activities of production, purchase, sale, or exchange of goods and services that involve the person or company for the purpose of generating profits".

According to Hakim (2006: 10), the term of performance or performance often associated with the company's financial condition. Performance is an important thing to be achieved by any company anywhere, because the performance is a reflection of the company's ability to manage and allocate resources.

According to Dwi and Arifin (2005) in his research proves that human capital positively and significantly associated with customer capital. With the tacit knowledge, human capital can create value (value creation), i.e. customer capital for the company. The Company was able to transform tacit knowledge into the knowledge inherent in the company's external relations.

Bontis (1998) and Partiw (2004) in Dwi and Arifin (2005) also found a significant positive relationship capital and structural human capital. However, the research Bontis et.al (2000) the relationship of human capital and structural capital depending on the industry sector. The relationship between the structural human services industry is positive not significant, while in the non-services industry is a significant positive. Similarly, Dwi and Arifin (2005) which also proves that the human capital positively and significantly associated with structural capital.

Companies are investing heavily to become a customer focus and a determinant of absolute market will be able to increase or improve its business performance. Consumer is the key to survive the failure of a company. If consumers are loyal to the company, the business performance will be maintained. Partiwani and Arifin (2005) in his research found that the Customer capital and not significantly positively associated with business performance.

Bontis (1998); Bontis et.al (2000) and Partiwani (2004) in Dwi and Arifin (2005) found a significant positive correlation between structural capital and business performance. Thus, the company's efforts to codify knowledge of companies and develop structural capital capable of generating competitive advantages relative yield higher business performance.

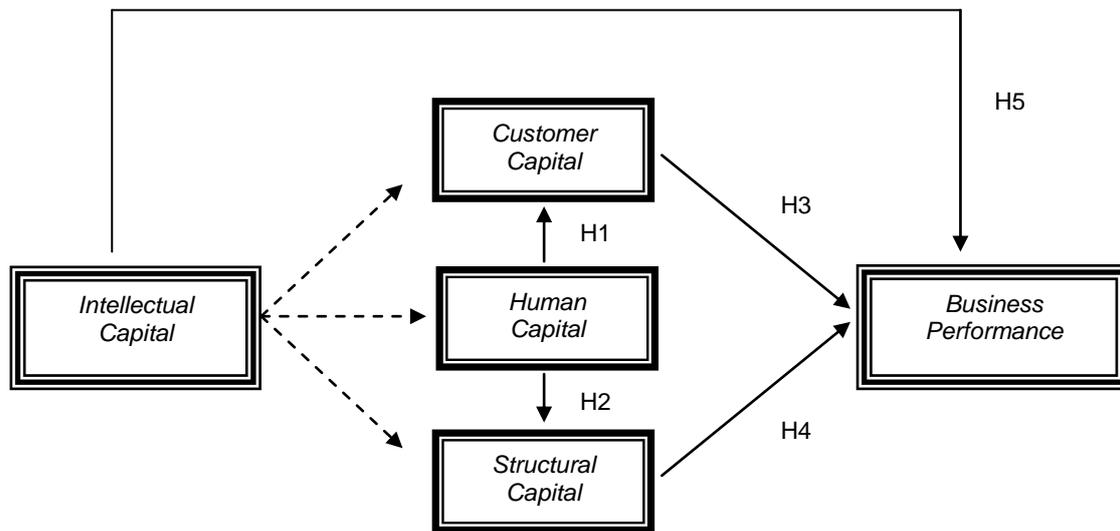


Figure 1 – Relationship Analysis Application of Intellectual Capital to Business Performance
(Source: Bontis, 2000)

Based on the above framework, the authors formulate hypotheses as follows:

H₁: Human capital significantly positively associated with Customer Capital;

H₂: Human capital significantly positively associated with Structural Capital;

H₃: Customer capital significantly positively associated with the Business Performance;

H₄: Structural capital significantly positively associated with Business Performance;

H₅: Intellectual Capital consisting of Human Capital, Customer Capital, Structural Capital significantly positively related to Business Performance.

METHODS OF RESEARCH

The object of this research consists of manufacturing companies located in Banten Province and is registered in the Department of Industry and Trade of Banten Province is located at Jalan Raya Jakarta Km. 4.5 Pakupatan Serang, Banten.

The method used in this research is associative; the research aims to determine the relationship between two or more variables. With this research will be constructed a theory that could serve to explain, predict and control the symptom (Sugiyono, 2007: 11).

The purpose of descriptive research is to describe the situation of widespread problems with the translation of the object being studied and a description of the research that has taken managerial decisions. According Rahayu (2005: 21) analysis is more of a description or explanation by making indicator-table, classifying, analyzing the data based on the results of the questionnaire answers obtained from respondents using data tabulation. This descriptive study used to describe how much the relationship between Intellectual Capital and its elements to the Business Performance in the manufacturing companies located in the province of Banten.

According to Mohammad Nazir (2003: 123), the indicator is a concept that has become wide value. When creating a conceptualization of indicator variables to be studied should be given boundaries and the following explanation:

1. Independent Variable also called independent variables (variables that affect), which is composed of Intellectual Capital: Human Capital, Customer Capital, and Structural Capital.

2. Dependent Variables also called the dependent variable (the variable that is affected), the Business Performance.

Table 1 – Variable Operationalization

Variable	Concept of Variables	Indicator	Likert	Measurement Scale
<i>Intellectual Capital</i>	Intellectual capital can be defined as the sum of what is produced by the three main elements of the organization (human capital, structural capital, and customer capital) related to knowledge and technology that can provide more value for the company in the form of competitive advantage of the organization.	<i>Human Capital, Customer Capital, Structural Capital.</i>	Likert scale was filled to the extent to which respondents agree with the seven Likert scale (1 = very well at all up to 7 = very well).	Ordinal
<i>Human Capital</i>	Human Capital is the knowledge, skill, and experience brought when employees leave the company that includes the individual's knowledge of an organization that is on employees.	H1, H2, H3, H4, H5R, H6, H7, H8.	Likert scale was filled to the extent to which respondents agree with the seven Likert scale (1 = very well at all up to 7 = very well).	Ordinal
<i>Customer Capital</i>	Customer Capital is the knowledge of a series of markets, customers, suppliers, relations between the government and the indicator or good relations with outsiders.	C1, C2, C3, C4, C5, C6, C7, C8.	Likert scale was filled to the extent to which respondents agree with the seven Likert scale (1 = very well at all up to 7 = very well).	Ordinal
<i>Structural Capital</i>	Structural Capital includes the company's ability to reach markets or the hardware, software and others that support the company in other words the infrastructure supporting employee performance.	S1, S2, S3, S4, S5, S6, S7, S8.	Likert scale was filled to the extent to which respondents agree with the seven Likert scale (1 = very well at all up to 7 = very well).	Ordinal
<i>Business Performance</i>	Described in the formal control system performance measures include the size of the financial and non-financial.	P1, P2, P3, P4.	Likert scale was filled to the extent to which respondents agree with the seven Likert scale (1 = very well at all up to 7 = very well).	Ordinal

Source: Penulis (2009).

Human Capital (H)

H1 Level of employee training

H2 employee competency

H3 Efforts to improve the skills and education of employees

H4 Intelligence and creativity are owned by employees

H5 The new recruitment system of comprehensive

H6 The experience of employees at work

H7 Performance of employees at work

H8 Trust company against employee

Customer Capital

C1 Image of the company's products

C2 Customer loyalty

C3 Quality of service to customers

C4 The time given to the customers of the complaints received

C5 Market Share of Companies

C6 Market Oriented Companies

C7 Understanding your target market and customer profiles.

C8 Relationships with suppliers

Structural Capital (S)

S1 Level routines in the move.

S2 Working procedures and bureaucratic system company

S3 The ease in accessing information

S4 Cultural and working conditions in the company

S5 database of companies

S6 The company is the most efficient.

S7 The organizational structure and job description in the company

S8 The procedure supports the innovation and implementation..

Business Performance (P)

P1 profit growth

P2 sales growth

P3 The level of success in the launch of new products

P4 Overall performance of achievement.

Type of research data is the data subject (self-report data). Source of research data is primary data (primary data) obtained directly from the original source, and through media intermediaries, namely electronic mail. As well as through secondary data is the use of data collected by other parties (library research) related to the research conducted. Sources of data obtained from the Department of Industry and Trade of the Province of Banten and manufacturing companies studied.

This study was conducted to obtain primary data is collected using a questionnaire survey method with data collection by sending a questionnaire via the contact person and

send e-mail to the respondent. In addition, also for obtaining secondary data, a list of manufacturing companies located in the Department of Industry and Trade of the Province of Banten.

This research is also done by reading and studying reference books and journals to obtain secondary data as the theoretical foundation that is appropriate to the issues raised.

The population of this research is manufacturing companies listed in the Department of Industry and Trade of the Province of Banten, as the sampling framework. Unit research is financial managers, personnel managers and production managers as the company representative.

The sampling technique used in this research is non probability sampling with the sampling pattern is purposive sampling. The population of this research is manufacturing companies listed in the Department of Industry and Trade of the Province of Banten. And the sample in this study is a manufacturing company in Banten province and has met the criteria proposed authors. The sampling criteria as follows:

Table 2 – Criteria Sampling

No.	Criteria	Value
1	Companies listed in the Department of Industry and Trade of the Province of Banten.	603
2	The manufacturing company limited liability and classified into upper and middle companies.	274
3	Manufacturing company which has an investment value of more than Rp. 2.000.000.000, -.	98
4	A manufacturing company that has employees more than 150 people.	60
Total Samples		60

Source: Penulis (2009).

Analysis of descriptive indicators used in this study is intended to provide an overview of the demographics of the respondents which include gender, age, education, past, position and tenure disclosed to clarify the description of the respondents. Processing descriptive indicator of respondents are using SPSS software version 12.0 (Statistical Product and Service Solution).

Data quality test conducted on the test reliability and validity test software Partial Least Square (PLS). Uji reliability intended to measure the internal consistency of a questionnaire which is an indicator of the indicator or construct. Measurement reliability tests conducted by test Composite Reliability ≥ 0.70 (Ghozali, 2006: 43).

The data collection is done with the approach of Structural Equation Model (SEM) using software Partial Least Square (PLS) analysis using PLS.

There are three criteria for assessing outer models: Validity, Diseriminant Validity, and Composite Reliability. Convergent validity of the measurement model with a reflexive indicator assessed based on the correlation between the item score / component score is calculated with the PLS. The size of the individual reflexive said to be high if more than 0.70 correlated with the construct being measured (Ghozali I., 2006):

$$AVE = \frac{\sum \lambda_i^2}{\sum \lambda_i^2 + \sum \text{var}(\epsilon_i)}$$

Where: λ_i is the component loading to the indicator and $\text{var}(\epsilon_i) = 1 - \lambda_i^2$. Significant AVE value must be greater than the value of 0.50.

By using the output generated PLS Composite reliability can be calculated by the formula:

$$pc = \frac{(\sum \lambda_i)^2}{(\sum \lambda_i)^2 + \sum \text{var}(\epsilon_i)}$$

Where: λ_i is the component loading into indicators and $\text{var}(\epsilon_i) = 1 - \lambda_i^2$.

Testing inner structural model or models made to look at the relationship between constructs, significance and R-square value of the model, f^2 magnitude can be calculated with the following formula (Ghozali I., 2006):

$$f^2 = \frac{R^2 \text{ included} - R^2 \text{ excluded}}{1 - R^2 \text{ included}}$$

Where: R^2 included and R^2 excluded is R-square of the dependent latent variables as predictors of latent variables used or issued in the structural equation. F^2 value equal to 0:02, 0:15, and 0:35 can be interpreted that the predictor variables have an influence latent small, medium, and large at a structural level.

The sampling technique in this research is using purposive sampling, the sampling technique that is based on specific criteria.

Table 3 – Details Returns Questionnaire

Information	Amount	Total
Delivery via Email	16	-
Direct Submission	44	-
Total Questionnaires were sent	-	60
Questionnaires were returned by email	14	-
Questionnaires were taken directly	32	-
Total Questionnaires were returned	-	46
Total Questionnaires were used	-	46
Rate of Return (Response Rate) (46/60 x 100%)	-	76.7 %
Returns are used	-	76.7 %

Location of Manufacturing

No.	Company location	Amount
1.	Serang	18
2.	Cilegon	11
3.	Tangerang	17
Total Company		46

Percentage of Business

Type of business	Percentage	Amount
Iron and Steel	28.2 %	13
Chemical material	13.04 %	6
Food and Drink	10.9 %	5
Sandals and Shoes	10.9 %	5
Furniture	8.7 %	4
Electronic	4.34 %	2
Clothes	4.34 %	2
Ceramics	4.34 %	2
Plastic	2.17 %	1
Oil	2.17 %	1
Machine	2.17 %	1
Car	2.17 %	1
Baby gear	2.17 %	1
Cable	2.17 %	1
Paper	2.17 %	1
Total	100 %	46

Source: Primary data is processed (2009).

Processing descriptive statistics were used by the author is using SPSS software version 12.0.

Table 4 – Descriptive Statistics

n/n	N	Minimum	Maximum	Mean	Std. Deviation
name of Respondent	46	1	46	23.50	13.423
Gender	46	1	2	1.28	.455
Respondents age	46	1	4	2.22	.513
Last education	46	1	3	1.93	.442
Position Respondents	46	1	3	1.63	.799
Years of service	46	1	4	2.04	.759
Valid N (list wise)	46				

Source: Primary data is processed (2009).

RESULTS AND DISCUSSION

Testing the validity of the data in this research is to use the Outer Model PLS software that Convergent validity as seen through the square root value of average variance extracted (AVE) of each construct where the value must be greater than 0.5.

Table 5 – Average Variance Extracted (AVE)

Variable	Average variance extracted (AVE)	$\sqrt{\text{AVE}}$	Information
CC	0.515	0.717	Valid
HC	0.620	0.787	Valid
SC	0.558	0.747	Valid
BP	0.754	0.868	Valid

Source: Output Smart PLS (2009).

Table 5 explains the value of AVE and AVE root of the construct of Human Capital, Customer Capital, Structural Capital, Intellectual Capital and Business Performance. The results stated that the root of AVE is greater when compared with the correlation of latent variables, it can be interpreted that the statements in the questionnaire declared invalid.

Similarly, the reliability test, the authors use the Composite software PLS with Reliability. The data is said to be reliable if, composite reliability of more than 0.7

Table 6 – Composite Reliability

Variable	Composite Reliability	Information
CC	0.879	Reliable
HC	0.907	Reliable
SC	0.881	Reliable
BP	0.924	Reliable

Composite Reliability: IC 0.897; BP 0.924. Source: Output Smart PLS (2009).

From Table 6 can be seen that every constructs or latent variables have a value of composite reliability above 0.7 indicating that the internal consistency of the dependent variable (Business Performance) and independent (Intellectual Capital consists of Human Capital, Structural Capital and Customer Capital) have good reliability.

Human Capital has a positive relationship indicated by the value Original sample estimate for 0618 and significant as indicated by the value of t-statistic 4053 was greater than t-table (1.96) against the Customer Capital, Then said first hypothesis is accepted that human capital has a significant positive relationship with the Customer Capital.

Table 7 – Results for inner weights

Variable	original sample estimate	mean of subsamples	Standard deviation	t-statistic	Hipotesis
HC -> CC	0.618	0.601	0.152	4.053	Diterima
HC -> SC	0.779	0.775	0.098	7.925	Diterima
CC -> BP	0.581	0.573	0.103	5.664	Diterima
SC -> BP	0.141	0.150	0.131	1.076	Ditolak

R-Square: CC 0.381; SC 0.607; BP 0.460. Source: Output Smart PLS (2009).

Human Capital has a positive relationship indicated by the value Original sample estimate for 0779 and significant as indicated by the value of t-statistics 7925 are greater than t-table (1.96) of the Structural Capital. So we can say the second hypothesis is accepted, the Human Capital has a significant positive relationship with Structural Capital.

Customer Capital has a positive relationship indicated by the value Original sample estimate for 0581 and significant as indicated by the value of 5664 t-statistic greater than t-table (1.96) to the Business Performance. The third hypothesis is accepted, it can be said that Customer Capital has a significant positive relationship with the Business Performance.

In addition to seeing how much influence among construct one with the other constructs can be seen from the R-square value that comes from goodness-fit test is a test model to a structural model (Inner Model).

Based on the data obtained and subsequently processed are presented in Table 7 Structural Capital have a positive relationship indicated by the value Original sample estimate for 0141 and not significant as indicated by the value of t-statistic 1,076 which is less than t-table (1.96) to the Business Performance. It is said that the fourth hypothesis is rejected Structural Capital had no significant positive relationship with the Business Performance.

Based on the data obtained and then processed authors presented in Table 8, Intellectual Capital as a whole has a positive relationship indicated by the value Original sample estimate for 0597 and significant as indicated by the value of t-statistic 5436, i.e. more than t-table (1.96) to Business Performance. Then said fifth hypothesis is accepted that Intellectual Capital has a significant positive relationship with the Business Performance.

Table 8 – Results for inner weight

Variable	Original sample estimate	Mean of subsamples	Standard deviation	T-Statistic	Hypothesis
IC -> BP	0.597	0.611	0.110	5.436	Accepted

R-Square: BP 0.357. Source: Output Smart PLS (2009).

CONCLUSION

Human Capital significantly positively associated with Customer Capital, as evidenced by the t-statistic is greater than the t-table is 4,053 > 1.96 and sample original estimate shows the mean value of 0.618 which correlates positively. This is due to company managers that include financial managers, personnel managers and marketing managers have always sought to maximize the thought of the image products to customers so that customer loyalty is high and the market share and market oriented companies to be increased. This is also supported by the managers of manufacturing companies in the province of Banten always trying to improve the intelligence and competence of its employees through training and education training recruitment system comprehensively, so that got employees who have the intelligence and creativity and work experience satisfactory to the company.

Human Capital significantly positively associated with Structural Capital, as evidenced by the t-statistic is greater than the t-table is 7925 > 1.96 and original sample estimate shows the value of 0.779 which means correlates positively. It also indicates that manufacturing firms in Banten Province has a good managerial system. With easy access to the needed information, culture and work environment that supports, a good database management, the implementation of a clear job description, the resulting company can make efficiency and support the creation of innovation and good implementation of its employees. Which is also supported by the employees who are smart and creative and competent in the field of each, so that the work undertaken will get good results, and employees feel safe and comfortable in work.

Customer Capital has a significant positive relationship with the Business Performance, as evidenced by the t-statistic is greater than the t-table is 5664 > 1.96 and sample original 0581 estimate shows significant value correlates positively. This indicates the company has been managing capital such good customer understand the target market, the profile and desires of customers, building good relationships with customers and suppliers. Through this, the company can continue to increase its market oriented and its market share as well as the image of the company's products to be good so that the customer loyalty will continue to increase. And this can affect the level of benefit in terms of profit and sales growth that can be seen with the success in launching a new product and performance achievement.

Structural Capital is not significantly positively associated with Business Performance, as evidenced by the t-statistic is less than t-table is 1.075 < 1.96, but the original sample estimate still shows positive value of 0141 which means that correlate positively. This is

because the manufacturing companies in the province of Banten have not been able optimally to improve the company's routines and procedures and bureaucratic system that is not fully done so in general this can weaken Business Performance which is owned by the company.

Intellectual Capital significantly positively associated with Business Performance, as evidenced by the t-statistic is greater than the t-table is $5,436 > 1.96$ and original sample estimate shows the value of 0.597 which means that correlate positively. This is because in general manufacturing in Banten province has implemented Intellectual Capital on their operations by either consisting of Human Capital, Customer Capital and Structural Capital. With the implementation of intellectual capital then this will affect the level of Business Performance or achievement of better corporate performance. And indirectly will bring benefits in the present and in the future for manufacturing companies in the province of Banten in particular.

Companies in general and manufacturing in particular are expected to further implement the Intellectual Capital consists of Human Capital, Structural Capital and Customer Capital is better. Because it was evident from the preceding discussion, by implementing the Intellectual Capital has an influence on the increase in Business Performance of the company, this is because between Intellectual Capital and Business Performance has a positive relationship.

In further research is expected to expand the scope of the model and used to sample more. So we get a better result and can prove the application of Intellectual Capital in all types of businesses and industries in relation to the Business Performance or the other dependent variables.

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METHOD ANALYSIS AND AGRICULTURE EXTENSION MEDIA IN THE FARMER GROUP OF HARAPAN SEJAHTERA AT THE SUBDISTRICT OF EAST TARAKAN, INDONESIA

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ABSTRACT

Agriculture extension is an effort to change the farmers' behaviors as well as their families in order to solve their problems in farming, so that they will be able to increase production and their welfares. Success in Agriculture extension process is determined by appropriate method and media application. Objectives of the research were to study the extent of method and media application in extension and to formulate strategy of method and media application in extension on the Farmer Group of Harapan Sejahtera at the Subdistrict of East Tarakan. Respondents of the research were members Group of Women Farmers of Harapan Sejahtera, 23 women and 2 Informants of Agriculture extension agents. Data analysis used Likert's scale and SWOT analysis. Results of the research showed that the extent of extension media and method application on the Farmer Group of Harapan Sejahtera are in medium categories, which have scores 11 and 12, respectively. Strategies of the application of method and media on extension toward the Farmer Group of Harapan Sejahtera include; (1) implementation of group method in giving the extension, (2) establishing the Meeting Hall as supporting means to perform extension activities, (3) utilizing online media (cyber extension) to transfer the extension.

KEY WORDS

Agro-extension, extension method, extension media, farmers group.

Agriculture sector plays important role in national economy, not only its contribution in increasing income of the Indonesian people, but also its interest in utilizing the national natural resources optimally, so that it is appropriate to establish the agriculture sector as national economic development motor. One of development approaches is improving human resources quality as the main actors of agriculture development that include farmers, gardener, breeder, and their families. Such improvement of human resources quality has been done through extension activity (Kementan, 2011).

Extension activity in agriculture development may become an effective means of policy to encourage agriculture development under situation whereas the farmers are not able to reach their goals due to limited knowledge and perception. It will become means of extension policy if it is in compliance with the interests of the government or organization, which finance the extension in order to reach the farmers' goals (Mardikunto, 2010).

Success of the extension activity may be supported by appropriate method and media application. Mardikanto and Arip (2005) suggested that method is the way how the extension agents try to close themselves to the targeted society. In general, media is used as mediator on learning process. Objective of the media is intended to clarify the transferred information, so that it will stimulate thought, feeling, attention, and ability of the targets. The extension agents are demanded to master method, media, and strategy of the extension, so that information given by the extension agents will be able to be accepted by the targets.

Extension at the East Tarakan Subdistrict, particularly on the Farmer Group of Harapan Sejahtera, mostly applies *anjangsana* (visits) method, in which the extension agents will come to the target's house or the farm location individually. The extension rarely applies in group and mass, particularly using audio visual media due to limited means and infrastructures, as well as costs.

In general, the targeted farmers have limited knowledge and ability in comprehending an innovation; therefore media and strategy of extension are important in extension process on the Farmer Group of Harapan Sejahtera. All this time, power point and brochures are used in extension process on the Farmer Group of Harapan Sejahtera, so that the extension process has not optimal yet. Based on the problem above, it should be found out the extent of method and media application in delivering extension and the strategy in applying method and media in delivering extension on the Farmer Group of Harapan Sejahtera at the East Tarakan Subdistrict in order to reach the goal of the extension.

LITERATURE REVIEW

Comprehensive approach against development will support the importance of education roles that include: (1) as basic requirements of the humans themselves; (2) as tool to fulfill other basic requirements; (3) as activity that maintain continuity and accelerate the development as a whole (Marzuki, 2009). The education process in extension activity is a learning process of adults, Suprijanto (2012), suggested learning characteristics of adults are as follow: (1) self-motivated to learn, (2) adults will learn if their opinions are respected; (3) real life-centered; (4) in general, adults have different ideas, intelligences, and the ways to learn; (5) it may create reciprocal communication and exchange ideas.

Agriculture extension is an informal education process to empower farmers and their families, as well as societies who are considered as agribusiness agents through informal education in agriculture sector in order to assist themselves economically, socially, and politically, so that they will be able to increase their incomes and welfares (Salim, 2005). Agriculture extension is a part of agricultural development system, which is considered as external education system (informal education) for farmers and their families, as well as the societies who get involved in agriculture development, therefore, Agriculture extension is an effort to create conducive climate that will assist the farmers and their families to grow dynamically and improve their lives and livelihoods by their own strength, which will finally lead to self-supporting (Soeharto, 2005).

Agriculture extension method is the way how to delivering material of Agriculture extension to the main actors and businessmen in order to encourage them to be able to assist and organize themselves in accessing information that concern with market, technology, capitalization, and other resources in order to increase their productivities, efficiencies, earnings, and welfares, as well as their awareness to conserve the living space (milieu) function (Aritonang, 2013).

Agriculture extension method closely relates to learning method of adults (andragogy). The extension agents who serve as educator, teacher, and motivator always relate to the extension targets that include farmers, breeders, and mature fishermen. In accordance to Van den Ban and Hawkins (1999), appropriate extension method or technique, which is chosen by the extension agents, depends on specific goal that is going to be achieved and the working situation. Diverse extension method does not mean that we have to choose the best one, but conformity of the method with the goal. Advantages and disadvantages of those three methods are given below:

Table 1 – Advantage and Disadvantage of Individual, Group, and Mass Method

Method	Advantage	Disadvantage
Individual	More efficient time Steady preparation	More formal and indistinct communication Relatively hard effect Relatively easier to be measured in organizing
Group	Relatively more efficient, clustered farming Distinct communicator	Organization problem Activity approach in establishing mutual group Difficulty in organizing discussion activity Requires building-up candidates for leader of the group who are skillful and dynamic
Mass	Less formal, massive farming Full of trust Immediately felt	Takes much time Higher costs Its effect is less efficient

Source: Aritonang, 2013.

Media is means to transfer messages from communicator to the public (Suprpto and Fahrianoor, 2004). In accordance to Isbandi (2005), media is tool or intermediary of distributor from one party to other parties.

Fluency of the extension agents in performing their jobs is affected by availability of the extension media. Such extension media has some benefits in the extension implementation. Benefits of such extension media include; (1) facilitating the extension agents in transferring information and facilitating the target to accept the information, as well as to avoid misunderstanding, (2) Extension media encourage curiosity of the targets to know more about the information, (3) Extension media perpetuates the information meaning gained by the targets, (4) Both extension agents and the targets tend to be pleased with the extension media because the material distribution is not boring (Effendi, 2005). Types of Agriculture extension media based on characteristics and examples are presented below:

Table 2 – Kinds of Agriculture extension Media Based on Characteristics and Examples

No	Type of Media	Example, Superiority, and Shortcoming
1	Printed Media	Picture, Sketch, Photograph, Poster, Leaflet, Folder, Blast map, Flash card, Diagram, Graphic, Chart, Map, Brochure, Magazine, Textbook Superiority: relatively longer duration, repeatedly readable, can be used in accordance with learning acceleration of each person, portable, etc. Shortcoming: Takes relatively longer time from delivering process to printing, it is difficult to present motion, requires sufficient literacy level, tends to be boring if it is solid and long text.
2	Audio Media	Cassette, CD, DVD, MP 3, MP 4 Audio Superiority: The packaged information is fixed, deep-rooted, and quietly similar if it is reproduced. Both production and reproduction are economic and easily distributed. Shortcoming: It may be boring if it takes longer time, reparation or revision must produce new master.
3	Visual and Audio–Visual Media	Slide film, Movie film, Film strip, Video (VCD,DVD) film, Television, Computer (Interactive, Presentation) Superiority: present more concrete images, both picture and motion, more attractive and communicative. Shortcoming: Production cost is relatively high; production takes longer time and requires expensive devices.
4	Physical Object or Real Object Media	Concrete object, Sample/Monster, Specimen, Model, Mock-up, Simulation Shows the real living things, has three-dimension shape, and props. Superiority: Provide learning environment, which is quietly similar to the real working environment, provide stimulation to many senses, it can be used as job training, practices using aids and/or simulation training. Shortcoming: Relative costly to provide real objects.

Source: Widodo, S and Nuraeni. I. 2006.

METHODS OF RESEARCH

The research was conducted on the Farmer Group of Harapan Sejahtera at the East Tarakan Subdistrict in Tarakan, which was determined purposively by considering that the farmer group has not been certified yet. Samples were collected using purposive method that included 23 farmers who are active in attending the extension activity and 2 key informants, the extension agent and the leader of the farmer group. Data of the research comprised of primary and secondary data, in which data was collected through interview, observation, documentation, study of literature, and questionnaire.

Data analysis to respond objective the research used Likert's scale. According to Ridwan (2008), Likert's scale is applied to measure attitude, opinion, and perception of individual or crowd about social affair in the form of statement, which will be categorized in scores as follow:

- a) Very Good = Score 5;
- b) Good = Score 4;
- c) Good Enough = Score 3;
- d) Bad = Score 2;
- e) Very Bad = Score 1.

Extent of the Method and Media application depends on the total scores. Based on total 8 questions, it will be calculated using specific equation of class range as follow:

$$RS = \frac{SkT - SkR}{JKI}$$

Where: RS = Score Range; SkT = The Highest Score ($4 \times 5 = 20$); SkR = The Lowest Score ($4 \times 1 = 4$); JKI = Amount of classification used (5).

Table 3 – Category for the Extent of Extension Media and Method Application

No	Category	Grade Interval
1	Very low	4.00 – 6.00
2	Low	7.00 – 9.00
3	Medium	10.00 – 12.00
4	High	13.00 – 15.00
5	Very high	16.00 – 20.00

Notes: Data was processed by the researcher, 2018.

In order to find out interval values of the extension method and media for each parameter, analysis of the research used index analysis, in which perception of each member of the farmer group is as follows

$$\text{Index Value} = \frac{(F1 \times 5) + (F2 \times 4) + (F3 \times 3) + (F4 \times 2) + (F5 \times 1)}{5}$$

$F1$ = Reply frequency of the respondent who answers 5;

$F2$ = Reply frequency of the respondent who answers 4;

$F3$ = Reply frequency of the respondent who answers 3;

$F4$ = Reply frequency of the respondent who answers 2;

$F5$ = Reply frequency of the respondent who answers 1.

External and internal strategic factors are establishment of SWOT matrix (David 2006). SWOT matrix is an important checking tool to assist government on stakeholders in developing 4 types of strategy, such as (1) strategy S-O, in which the strategy uses internal strength to utilize external opportunity, (2) strategy W-O, in which the strategy is intended to fix the internal weakness by utilizing the external opportunity, (3) strategy S-T, in which the strategy uses internal strength to avoid any external threat and influence, as well as (4) strategy W-T, in which the strategy is directed to reduce internal weakness and avoid any threat of external environment.

RESULTS OF STUDY

Extent of Agriculture extension Method and Media Application on the Farmer Group of Harapan Sejahtera. Message or material of the Agriculture extension is acceptable and understandable, as well as applicable, so that it will improve ability if the selected way to deliver the extension is appropriate with condition of the farmers.

Table 4 – Extent of the Extension Method Application on the Farmer Group of Harapan Sejahtera

No	Parameter	Score					Total	Mean	Criteria
		5	4	3	2	1			
1	Ability of the extension agent	5	5	7	3	3	75	15	High
2	Method conformity	3	4	7	3	6	64	12	Medium
3	Conformity of the extension location	2	1	3	6	11	46	9.2	Low
4	Conformity of the given material	3	2	7	5	6	60	12	Medium
Mean							61.25	12	Medium

Data Source: Processed by the Researcher, 2018.

Selection of the ways or method and media of the extension will determine the success in implementing such Agriculture extension program as a part of agricultural development. Extent of the extension method application on the Farmer Group of Harapan Sejahtera is presented in Table 4.

Parameter of Agriculture extension method application on the Farmer Group of Harapan Sejahtera is generally in medium category, 12 on average. It is due to special meeting means for such extension activity has not been available, so that extension can only be conducted through individual visit (*anjangsana*). According to Hamundu (1997), there are two levels of opinion in determining the extension method; (1) It should concern with expertise and extension technique, which are combined in each method, (2) It should select the best method or combination of some methods to reach the goal and strategy of the extension.

Table 5 – Extent of the Extension Media Application on the Farmer Group of Harapan Sejahtera

No	Parameter	Score					Total	Mean	Criteria
		5	4	3	2	1			
1	Conformity of Media	2	2	6	6	9	57	11	Medium
2	Simplicity	1	3	7	5	7	55	11	Medium
3	Attractive	3	2	5	6	7	57	11	Medium
4	Language	3	2	7	5	6	60	12	Medium
Mean							57.25	11	Medium

Data Source: Processed by the Researcher, 2018.

Based Table 5 above, parameter of the extension media application on the Farmer Group of Harapan Sejahtera is generally in medium category, 11 on average. It is due to the applied media for such extension activity has not been optimal yet, so that it may not attract the targets. According to Hamzah (2010), today it may be not appropriate anymore if teaching and extension delivering are still given verbally because communication technology has grown rapidly. However, we have to endeavor to use all devices in order to establish effective extension.

Strategy of the Agriculture extension Method and Media Application on the Farmer Group of Harapan Sejahtera. Each individual has different ability to learn something, as well as his/her mental development stage, environmental circumstances and opportunities, so that appropriate, effective and efficient Agriculture extension method and media should be defined. Therefore, it requires strategy of Agriculture extension method and media implementation in order to achieve the extension goal. Formulating the strategy of extension method and media application was initiated by identification of internal and external factors.

Table 6 – Internal and External Factors; Application of the Extension Method and Media on the Farmer Group of Harapan Sejahtera

INTERNAL FACTOR		
No	Strengths	Weaknesses
1	High cooperation among farmers	Low education level of the farmers
2	Farmers produce farming products	Lack of Audio Visual Media application during extension
3	Existence of Farmer Group Institution	Lack of farmers' participation in Extension activity
4	Productive age of the farmers	
EXTERNAL FACTOR		
No	Opportunities	Threats
1	Support from the government	Lack of Extension agent
2	Availability of communication access as extension media	No specific place for meeting
3	Competent extension agent in using the extension media	Limited budget for extension

Source: Primary Data is Processed, 2018.

Table 7 – Scores for Rating and Weight on Internal and External Factors

No	Factor	Rating	Weight	Score
INTERNAL FACTOR				
STRENGTHS				
1	High cooperation among farmers	4	0.16	0.64
2	Farmers produce farming products	3	0.13	0.39
3	Existence of Farmer Group Institution	4	0.17	0.68
4	Productive age of the farmers	3	0.13	0.39
TOTAL				2.1

Table 7 Continue				
WEAKNESSES				
1	Low education level of the farmers	4	0.16	0.64
2	Lack of Audio Visual Media application during extension	3	0.12	0.36
3	Lack of farmers' participation in Extension activity	3	0.12	0.36
TOTAL				1.36
EXTERNAL FACTOR				
OPPORTUNITY				
1	Support from the government	3	0.16	0.48
2	Availability of communication access as extension media	4	0.18	0.72
3	Competent extension agent in using the extension media	3	0.16	0.48
TOTAL				1.68
THREATS				
1	Lack of Extension agent	3	0.16	0.48
2	No specific place for meeting	4	0.18	0.72
3	Limited budget for extension	3	0.13	0.39
TOTAL				1.59

Source: Primary Data is Processed, 2018.

Based on table above that concerning with internal and external factors, X (abscissa) and Y (coordinate) can be defined:

$$X = S + (-W) = 0.74$$

$$Y = O + (-T) = 0.09$$

Based on the mapping, it defines that position of the extension method and media application is on strategy I, Aggressive Strategy. It shows that strength of the extension agents should be able to take the opportunities optimally and improve the identified weaknesses, simultaneously. Therefore, during determination of strategy and key factor of success, it should be more directed to the aggressive strategy. The next step of SWOT analysis is defining strategy of the extension method and media application into 4 (four) categories by keep watching the dominant position on Aggressive Strategy in accordance with the position determination. Those strategies are as follow:

Table 8 – Strategy of the Extension Method and Media Application on the Farmer Group of Harapan Sejahtera

IFAS FACTOR	Strengths (S)	Weaknesses (W)
EFAS FACTOR	High cooperation among farmers (S ₁) Farmers produce farming products (S ₂) Existence of Farmer Group Institution (S ₃) Productive age of the farmers (S ₄)	Low education level of the farmers (W ₁) Lack of Audio Visual Media application during extension (W ₂) Lack of farmers' participation in Extension activity (W ₃)
Opportunities (O) Support from the government (O ₁) Availability of communication access as extension media (O ₂) Competent extension agent in using the extension media (O ₃)	Strategy S-O Implementing group method during extension activity (S _{2,3} ,O _{1,3}). Building a Meeting Hall as means for the extension activity (S _{2,3} ,O ₁) Utilization of cyber extension in performing extension (S _{2,4} ,O _{2,3})	Strategy W-O Performing introduction and training by using online media for extension (W _{1,2} ,O _{1,2}). Applying direct method in delivering extension (W _{2,3} ,O _{1,2})
Threats (T) Lack of Extension agent (T ₁) No specific place for meeting (T ₂) Limited budget for extension (T ₃)	Strategy S-T Adding more extension agents (S ₃ ,T ₁) Increasing frequency of meeting with members of the farmer group (S _{2,3} ,T ₁) Optimizing the application of available media for extension activity (S _{1,2,3} ,T ₃)	Strategy W-T Raising budget for extension (W ₂ ,T ₃) Complementing means and infrastructures that support the extension implementation (W _{1,3} ,T ₂) Increasing competence of the extension agents through training (W _{1,2} ,T ₁)

Source: Processed-Primary Data, 2018.

CONCLUSION AND SUGGESTIONS

Based on result of the research toward the extent of extension method and media application on the Farmer Group of Harapan Sejahtera at the East Tarakan Subdistrict, it belongs to medium criteria by score 11 for the extent of method application and score 12 for the extension media application.

Based on the analysis result of SWOT, it showed that strategy in applying method and media on the Farmer Group of Harapan Sejahtera is set on quadrant I (one), aggressive strategy. The applied strategies are as follow: implementing group method during extension activity; building a Meeting Hall as means for the extension activity; utilizing online media (cyber extension) in performing extension.

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MARKETING STRATEGY FOR START-UP: A STUDY OF HOME CARE BUSINESS

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ABSTRACT

Every company that wants to start its business must create a strategy to market its products or services, one of them on home care business. The current fierce competition forces companies to adopt appropriate marketing strategies, to achieve the goals set by the company or to retain the company. The purpose of marketing activities here is to influence consumers to be willing to buy goods or services company when they need goods or services on offer. Home Care in Indonesia has been around since the year 1880 but until now there is only 50 Home Care business registered with the ratio of the number of hospitals there 2488 in Indonesian so the opportunity for Home Care is still very large. To achieve the target market for Home Care requester in need strategy, strategy used in marketing is Marketing Mix. Marketing Mix is a strategy to analyze four segments in terms of price, place, promotion, and product. And this concept is very supportive in marketing because by applying this strategy we can analyze about the price on the market, the location in accordance with the target / segment, proper promotion, and product desired by the customer. Therefore the company must be able to understand the consumer behavior as well as knowing marketing strategies that must be done so that we can achieve desired goals. So to achieve the company's goals it takes marketing strategies that are useful for monitoring what's happening and what's going on inside the company and anticipating problems and opportunities in the coming period in a rapidly changing corporate environment.

KEY WORDS

Marketing strategy, business, home care, marketing mix, risk, online media.

The increased life expectancy means the greater the likelihood that a person may live longer or become older, wherein an elderly person is found to be more susceptible to health problems caused by several factors (Elliott *et al.*, 2010). In elderly individuals often face changes to their lives, such as physical incapacity, placement in the Wredha Home, where families do not support, retire, couple's death and family death (Fitria, 2010).

The disease that many suffered by the elderly in general is a degenerative disease. Degenerative disease is a disease that arises due to the process of deterioration of body cell function towards the worse. One of the degenerative diseases that require long-term treatment is stroke (Bassetti *et al.*, 2006). Health facilities that can provide health services such as hospitals and home care, but the hospital has the ability to care for patients in a long time such as limited health workers and beds for the need of other health facilities that can provide services within a time Old Like Home Care, to solve the problem then there is home care business (Fletcher & Hirdes,).

Home Care is a health service provided at the home of patients, which became one option to make the sick become comfortable and not separated from the family. Our Home Care business has focused and targeted users of its service products, all of the population of degenerative diseases especially elderly people aged over 60 years but did not rule out also for the age before 60 years for those suffering from stroke or post-hospital treatment.

Technological developments are increasingly advanced, including in the medical field, indirectly can lead to an increase in life expectancy of a person so that population growth to increase. Current business trends are businesses that innovate with technology. The development of existing technology business in Indonesia is currently quite rapidly when

compared with several years ago. Currently, many people are aware of the importance of technology so as to provide positive feedback to various tech businesses.

Home care business care based on technology and provide convenience to those who need to access it will be needed by the community especially for patients who still need further nursing care assistance at home after the patient returns from hospital treatment, thus it is expected that sustained service in patient's home will lighten Suffering the patient and reducing her disability (Leatherman *et al.*, 2003).

A marketing strategy can be expressed as a basis for action that leads to a marketing activity or business, of a company, in a state of competition and an ever-changing environment in order to achieve its intended purpose (Cravens, & Piercy, 2006). So in determining the marketing strategy that will run the company must first see the situation and market conditions and assess its position in the market. By knowing the circumstances and situation and position in the market can be determined marketing activities that must be implemented.

In Home Care business we use marketing mix. Marketing Mix is a tactical marketing tool that can be controlled, product, price, distribution, and promotion combined by the company to produce the desired response in the target market. Marketing mix is used as a method of analysis that can support the segment earlier from our business (Yoo *et al.*, 2000).

LITERATURE REVIEW

Marketing identifies consumer's needs and supplies various good and services to satisfy those needs most effectively. So the businessmen need to produce or manufacture the product according to consumers' need; make available it at a price that the consumers' find reasonable; supply the product to the consumers at different outlets they can conveniently approach; and inform the consumers about the product and its characteristics through the media they have access to (Quester *et al.*, 2007).

So the marketing manager concentrates on four major decision areas while planning the marketing activities, namely, products, price, place and promotion. These 4 'P' are called as elements of marketing and together they constitute the marketing mix. All these are inter-related because a decision in one area affects decisions in other areas (Cunningham *et al.*, 2008). Marketing involves a number of activities. To begin with, an organization may decide on its target group of customers to be served. Once the target group is decided, the product is to be placed in the market by providing the appropriate product, price, distribution and promotional efforts.

These are to be combined or mixed in an appropriate proportion so as to achieve the marketing goal. Such mix of product, price, distribution and promotional efforts is known as 'Marketing Mix'. According to Philip Kotler "Marketing Mix is the set of controllable variables that the firm can use to influence the buyer's response". The controllable variables in this context refer to the 4 'P' (product, price, place and promotion).

The marketing effective program should be able to integrate all elements of the marketing mix into an integrated marketing program designed to achieve the company's marketing goals by delivering value to consumers. After building and implementing the above 4 P, marketers should consider these four things consisting of: Customer Solutions that is products can help and solve consumer problems, customer Cost that is the price paid by consumers to purchase the product according to their needs and wants, Convenience that is the product is able to please the consumer because it is easily obtained everywhere and Communication that is producers communicate products to consumers properly and on target.

Each firm strives to build up such a composition of 4'P, which can create highest level of consumer satisfaction and at the same time meet its organizational objectives. Thus, this mix is assembled keeping in mind the needs of target customers, and it varies from one organization to another depending upon its available resources and marketing objectives. Four components of marketing mix are product, price, place and promotion.

METHODS OF RESEARCH

We used qualitative method through literature study or desk research. This study is data on problems that are experiencing the environment with business, industry analysis, market analysis, and market segmentation. In addition, this study also uses a variety of literature related to the problem to be studied. In addition, research is also available in the form of data and information from existing care home care in Jakarta, Tangerang City, and South Tangerang.

This research uses the method and technique of data by doing observation, that is seeing the direct object that is needed, and then do documentation with record every report that produced and researcher also collect data through question and answer directly to the owner either by phone or home business that already exist.

RESULTS AND DISCUSSION

We use marketing mix analysis in starting home care business. Marketing mix divided into four components that can achieve the target marketing. These 4 'P' are called as elements of marketing and together they constitute the marketing mix. Four components of marketing mix are product, price, place and promotion.

Product refers to the goods and services offered by the organization. All these are purchased because they satisfy one or more of our needs. We are paying not for the tangible product but for the benefit it will provide. So, in simple words, product can be described as a bundle of benefits which a marketer offers to the consumer for a price. Product can also take the form of a service like an air travel, telecommunication, etc. Thus, the term product refers to goods and services offered by the organization for sale.

The product segment from Home Care we offer is divided into two segments namely regular package that is Home Visit and premium that is Home Stay. Regular package that can be ordered according to patient's wishes wherever and whenever. As well as a premium package that provides two packet options for patients one month and two weeks with a partial and total treatment classification that the nurse needs has been determined by the physician according to the patient's condition.

For patients with partial classification requires only one nurse and for patients who can totally use the services of two nurses depending on the needs of patients and families. The development of the medical field in line with the fast running time, and for Home Care services is still not too well known, but look at the experience that is already there At ODIS Home Care present to offer Home Care services with two different types of products and can be accessed online for patients Degenerative diseases especially elderly people who have a stroke and need care at home. Where by offering optimal service with qualified medical personnel as well as ease in ordering process, accuracy and service.

Price is the amount charged for a product or service. It is the second most important element in the marketing mix. Fixing the price of the product is a tricky job. Many factors like demand for a product, cost involved, consumer's ability to pay, prices charged by competitors for similar products, government restrictions etc. have to be kept in mind while fixing the price. In fact, pricing is a very crucial decision area as it has its effect on demand for the product and also on the profitability of the firm. Our Home Care charges the prices according to the middle and upper middle class patient classification as well as the insurance.

Goods are produced to be sold to the consumers. They must be made available to the consumers at a place where they can conveniently make purchase. The organization has to decide whether to sell directly to the retailer or through the distributors/wholesaler etc. It can even plan to sell it directly to consumers. On home care business we plan to sell services directly through the online system that will facilitate customers to place an order. After analyzing the environment, we choose to establish home care in Tangerang city. The location was chosen based on observations of the need for considerable Home Care services both in the hospital setting and personal demand and within easy reach.

If the product is manufactured keeping the consumer needs in mind, is rightly priced and made available at outlets convenient to them but the consumer is not made aware about its price, features, availability etc., its marketing effort may not be successful. Therefore promotion is an important ingredient of marketing mix as it refers to a process of informing, persuading and influencing a consumer to make choice of the product to be bought. Promotion is done through means of personal selling, advertising, publicity and sales promotion. It is done mainly with a view to provide information to prospective consumers about the availability, characteristics and uses of a product. It arouses potential consumer's interest in the product, compare it with competitors' product and make his choice. The proliferation of print and electronic media has immensely helped the process of promotion.

Promotion is all the activities the company does to inform, persuade the market about new products or services in the company through advertising, personal sales, sales promotion and publications. There are several concepts that are used to do the promotion, including the above the line, below the line and the latest concept of Integrated Marketing Communication (IMC). At Home Care that will be established will use the concept of promotion using Integrated Marketing Communication (IMC).

Integrated Marketing Communication (IMC) is a concept whereby a company integrates and coordinates various communication channels to send a clear, consistent, and convincing message with respect to the company and its products (Kotler *et al.*, 2005), to be able to achieve communication goals. Companies can use a tool called promotion mix. The elements of promotion mix are advertising, personal selling, direct marketing, public relations, and promotion through events, word of mouth, and sales promotion.

The business Home Care in word of mouth has various ways to create issues for Home Care to be established to build image and brand equity. Some issues that can be made for the application of word of mouth include marketing with word of mouth already exists with classical methods such as delivery of issues made to existing communities such as health centers and elderly communities and recitation, so that the conversation for the community.

The business home care also uses direct marketing method, which is on this method of home care we work together on the first level health facility to establish a stand in partner hospital that serves as an activity of introduction of home care to prospective customers.

The business home care also takes advantage of the Tools event, for the sixth month after the opening of home care counseling with some topics, on counseling which invites the experts as speakers, for example elderly gymnastics, at the Home Care seminar we invite doctors and nurses at the end The event was created with a promotional insert about home care to be established.

In the next event held customer gathering, the event is in order for the regular customer who uses Home Care services regularly in home care. The last event is to celebrate the holiday together; the event is intended for all internal and external parts that have a relationship with home care.

Advertising on home care to be established is divided into two, namely online and conventionally. Online method of advertising home care create a website with a company profile, how to register. In the conventional method, advertising is done by making a brochure to be distributed to the booth that is held in first level fasces

Public relations is the last tool in use in promotion activities home care on this activity public relations is done at the opening invites several press including the online press from the website of the government of Tangerang City and the bloggers who already have a good reputation with the number of followers above ten thousand. By using the services of blogger blog marketing word of mouth can happen by itself so that the public can be more familiar with home care.

The Risk on marketing is a potentially adverse event and it is known how many chances that the event will actually occur and how big the impact would be if the event actually happened.

The steps in minimizing the risk of product failure include market understanding, for example with qualitative research, categorization and segmentation to find out the competition map in the industry, the reasons why consumers buy certain products, how they

use a product and what needs are not met and when approaching a category assessment research, you examine consumer behavior toward products and product usage in a category, how consumers evaluate brands based on product attributes, what drives consumers to make purchases, and identifies consumer needs and fulfills their needs.

Home Care on marketing there are risks that can occur when sales targets are not achieved in the years that the solution has been set when normal sales targets are not achieved within a year there will be more regular promotions to various places such as health facility, radio, and some targeted Home Care target communities. And in the long run if the target is not achieved in marketing then there will be research on Home Care market in each target location such as in Tangerang City, South Tangerang, Tangerang Regency, and West Jakarta as a basis for the company in exploring the market understanding of the products we offered, Knowing the customer experience when using the product, evaluating the price with competitors, and how the product sell.

The risks can be anticipated by raising promos and making MOUs to partner hospitals, and offering to send each patient to Home Care will earn points for later seminars and training of the partner hospital. And in any agreement if in the emergency situation the Home Care will also direct and send patients to the hospital partner. The marketing risks that have been described can be anticipated by the company with a consideration when there are changes or constraints that exist in the Home care business environment.

CONCLUSION

The results of the analysis and discussion qualitatively conclude that Marketing Mix is a tool or tactical marketing strategy that can control product, price, distribution, and promotion combined by the company to produce the desired response in the target market". Marketing mix is used as a method of analysis that is able to support in starting a business as well as business development that will have a good impact to the success of the company. So to achieve the company's goals it takes marketing strategies that are useful for monitoring what's happening and what's going on inside the company and anticipating problems and opportunities in the coming period in a rapidly changing corporate environment.

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THE IMPACT OF CHARISMATIC LEADERSHIP ON TURNOVER INTENTIONS AND ORGANIZATIONAL CITIZENSHIP BEHAVIORS TOWARD JOB SATISFACTION

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ABSTRACT

Leadership plays a pivotal role in the organization. One of styles of leadership is charismatic leadership, of which, can improve organizational performance. The main objective of this research is to perceive how charismatic leadership can be boosted job satisfaction, reduce turnover intentions and increase organizational citizenship behaviors (OCB). To meet this objective, data collected through questionnaires distributed online to 110 employees working in Jakarta from diversified nature of organizations and was analyzed by Structural Equation Modeling (SEM) Lisrel. The results of this research indicate that charismatic leadership can be boosting job satisfaction, organizational citizenship behaviors, yet, the job satisfaction and organizational citizenship behaviors are also increasing turnover intentions in the organization. This finding is fascinating since previous researches show the job satisfaction and charismatic leadership may reduce turnover intentions. To conclude, this study has several insightful and eye opener facts for the management-charismatic leadership and high degree of job satisfaction do not guarantee the employees remain in the same organization.

KEY WORDS

Charismatic leadership, job satisfaction, turnover intentions, organizational citizenship behaviors, employees, Jakarta.

Charismatic leadership has always been an interesting variable to discuss and explore. Among the researchers who had been researched, the influence of charismatic leadership are Babcock-Roberson & Strickland, 2010; Chung et al., 2011; Vlachos et al., 2013; Zehir et al., 2014; and Lindblom et al., 2016.

Researchers in Organizational Behavior Study have been prolonged interested in exploring how employees' perceptions toward their leaders, influence the thoughts and behaviors associated with their work. The above studies showcase a significant positive linkage between charismatic leadership towards work engagement and organizational citizenship behaviors. Moreover, charismatic leadership approaches the organizational citizenship behaviors through work involvement has a significant positive impact (Babcock-Roberson & Strickland, 2010). On the other hand, self leadership skill complements the charismatic leadership; it does not replace the influence of charismatic leadership in the context of internalization and identification (Chung et al., 2011).

Zehir et al. (2014) reveal how charismatic leadership has a positive impact on ethical climate and organizational citizenship behaviors. Ethical climate is found as an unstrong mediator between charismatic leadership and organizational citizenship behaviors, however, this ethical climate is able to approach the interdependence amongst the dimensions of civic wisdom in organizational citizenship behavior, dimensions of sensitivity to the environment, strategic vision and articulation, sensitivity to the needs of members and the status quo.

In the retail industry, charismatic leadership also significantly influenced the job satisfaction, self-efficacy, organizational identification and turnover intentions. Employees' perception on charismatic leadership has a strong positive affection particularly to frontline employees, job satisfaction, self-efficacy, and organizational identification. Nonetheless, charismatic leadership has a strong negative impact on turnover intentions. Frontline employees remain in the same office despite getting attractive and better offers in another business (Lindblom et al., 2016). In line with Lindblom et al. (2016), the results of previous

studies were also carried out by Vlachos et al. (2013) that charismatic leadership greatly influences employee job satisfaction, either directly or mediated by intricate values. While employees' points of view of their managers have charismatic leadership qualities, they tend to be actively involved in Corporate Social Responsibility (CSR) activities with intrinsic values. This leads to job satisfaction.

Previous studies rarely discussed specifically in the influence of charismatic leadership on job satisfaction, turnover intentions, and organizational citizenship behaviors. Previous research shows limited findings in charismatic leadership which has a direct and significant effect towards ethical climate, turnover intentions, organizational citizenship behaviors, job satisfaction, self-efficacy, self-leadership, organizational identification and work involvement. This research may distinguish from previous studies since we include charismatic leadership effects on turnover intentions and organizational citizenship behaviors that are mediated by job satisfaction.

The objectives of this research are: first, to learn how charismatic leadership influences job satisfaction; second, to find out how employee's job satisfaction affects turnover intentions; third, to find out how job satisfaction influences organizational citizenship behaviors; fourth, to find out how charismatic leadership influences turnover intentions; and fifth, to find out how charismatic leadership influenced organizational citizenship behaviors. Finally, we elaborate the findings of this research and provide some practical and theoretical implications.

LITERATURE REVIEW

Charismatic leadership theory is currently adopted Max Weber's ideas (1947, as cited in Yukl, 2010) – a sociologist from Germany defines the charisma comes from Greek literature which means gift. This charismatic leader has an ability to do miracles or predict the future. According to Weber, charisma occurs when social crisis happens. This leader emerges with a radical vision that offers a solution to the crisis, attract followers who believe in that vision. Thus, this vision is achieved and the followers believe that this leader is an extraordinary person. Conger & Kanungo (1987) defines charismatic leadership is an attribute stated by followers who observe certain behaviors in the leader at the organization. Charismatic leadership and other types of leadership can be studied as a dimension of leadership. Such as participatory, task or people orientations. By tracing the basis of perceived charisma behavior, the construct has dropped from its mystical epiphenomenal status to a phenomenal status that can be observed empirically (Conger & Kanungo, 1992). Charismatic leadership behavior includes strategic vision, high quality articulation, sensitivity to the environment and the needs of the follower, personal risks taking and unconventional behavior (Conger et al. 1997). Charismatic leadership according to Robbins & Judge (2012), is the leader, who the followers believe that he/she has extraordinary attributes of heroism with the certain actions. Choi (2006) argues that charismatic leadership consists of three components, namely envisioning, empathy and empowerment.

Job satisfaction according to Davis (1985) is a pleasant or unpleasant feeling experienced by the employees at work. Job satisfaction is a positive emotion about work. This result comes from an evaluation of each job's characteristics. The content workers increase customer satisfaction and loyalty, constructive OCB, and effective performance (Robbins & Judge, 2012). Job satisfaction is an emotion that reinforce or does not reinforce employees, with their work and themselves. Emotions at work involve multiple aspects such as wages career development opportunities, relationships with other employees, work placements, types of work, company organizational structure, quality of supervision. Whereas self emotions related to his/her personal portray, including age, health conditions, abilities and education (Mangkunegara, 2015).

Turnover intentions are an intention or individual effort to end the employment within the organization at a certain time. Turnover is defined as the discharge of employment from the company permanently by employees (voluntarily) or by the company (Robbins & Judge, 2012). Turnover intentions are referred to employee behavioral tendencies (voluntarily) to

leave the organization. Previous research was found that turnover intentions were stronger caused and direct predictors of actual turnover (Jang & George, 2012). High turnover intentions can disrupt company financial position, leads to low organizational performance, productivity, morale and disruption of services. Those lead to customer dissatisfaction (Simons & Hinkin, 2001).

Bateman & Organ (1983) argues that organizational citizenship behaviors include behaviors to assist colleague, works by orders (without rejection), not complaining on additional assignments aside from normal routines, paying attention to cleanliness and tidiness of working space, talking positively with regard to the organization, to build a healthy and warmth atmosphere, and utilize organizational resources efficiently. Organizational citizenship behaviors explicitly described by Organ (1988) are individual behaviors that are discretionary, not directly or explicitly recognized by the formal system, and in aggregate promote the effective functioning of the organization. Discretion in this research is, the behavior to perform without the job description or clear directions outlined in the contract, hence it is done by the personal initiative. As a result, the punishment will not be implemented if the job negligent occurred. Podsakoff et al. (2000) specifically examined the literature on organizational citizenship behaviors and other related constructs. The research was conducted to explore the conceptual similarities and differences between the various forms of "citizenship" identified in the literature. The research also summarizes the empirical findings from both the antecedents and consequences of organizational citizenship behaviors. Furthermore, this research also identified some interesting directions for future research.

HYPOTHESES DEVELOPMENT

Job satisfaction in a company or organization does not come naturally (Lebi & Anindita, 2018). Many factors influence employee job satisfaction, like compensation, transformational leadership, charismatic leadership, work environment, and others. Lindblom et al. (2016) conducted a study on the Finnish retail industry relating to the influence of charismatic leadership on job satisfaction, and the results of his research found that charismatic leadership has a robust impact on job satisfaction, meaning that charismatic leadership leads to job satisfaction. This research also relates to Vlachos et al. (2013), who also do research on charismatic leadership. Vlachos et al. (2013) argue that charismatic leaders impose behaviors that give meaning to employees' work. This leader also give challenges with broader targets. Once the targets are active, it elevates the sense of job satisfaction for employees.

From the above argument, the researcher proposed the hypothesis:

H1: Charismatic leadership will positively relate to job satisfaction.

To analyze turnover intentions, the researchers focused on the relationship between turnover intentions and their predictive variables. An overview of the results of his research reveals that variables such as job satisfaction, organizational trust, managerial support, and equalities, have clear predictive roles on turnover intentions (Lee et al., 2017). In the study of Arfian & Anindita (2017) it was found that low job satisfaction leads to enlarge turnover intentions ratio, meaning that to reduce turnover intentions, the organization must expand job satisfaction, as a result turnover intentions increased significantly. Zhang & Feng (2011) in his research conducted in Hubei, China to 1,600 doctors showed that there might be the effect of work fatigue, especially emotional fatigue, thus the impact of job satisfaction on turnover intentions increased. This indicates that the increase of job satisfaction is expected to reduce the turnover of the intention of doctors in Hubei, China. The results of the study are also in line with the research conducted by Shu et al. (2018) which states that job satisfaction significantly affects turnover intentions in family business.

From the above argument, the researcher proposed the hypothesis:

H2: Job satisfaction will negatively relate to turnover intentions.

The relationship between job satisfaction and organizational citizenship behaviors has been investigated by many researchers and widely published. The results of testing the

relationship between job satisfaction and organizational citizenship behaviors that were moderated by team commitment showed that the stronger of the relationship, the higher team commitment (Foote & Tang, 2008). This research is strengthened by Mogotsi et al. (2011) who conducted a research of secondary school teachers in Botswana; the results stated that job satisfaction is a strong predictor of organizational citizenship behaviors.

From the above argument, the researcher proposed the hypothesis:

H3: Job satisfaction will positively relate to organizational citizenship behaviors.

In general, it has been suggested that turnover intentions decrease when the leaders value their members and highlight individual values and their contribution (Dixon & Hart, 2010). For example, (Lindblom et al., 2016) assume that frontline employees prefer to be lead by charismatic retailer, thus they want to be supervised by this charismatic retailer, even if there are better alternatives., the frontline employees choose to remain in this organization. This proves that the influence of charismatic leadership is very strong towards employee intentions, meaning that charismatic leadership can reduce employee turnover intentions.

From the above argument, the researcher proposed the hypothesis:

H4: Charismatic leadership will negatively relate to turnover intentions.

Previous research conducted by Babcock-Roberson & Strickland (2010) shows empirical support for the mediating role of work engagement in the relationship between charismatic leadership and organizational citizenship behaviors. These findings support the idea if charismatic leaders are present, employees are more active to do their job, and ultimately promote citizenship behaviors. In line with Babcock-Roberson & Strickland (2010), Zehir et al. (2014) also examined the role of mediating ethical climate in the relationship between charismatic leadership and organizational citizenship behaviors. However, the results of his research indicate that ethical climate was found to be an unstrong mediator in the relationship between charismatic leadership and organizational citizenship behaviors. Furthermore, Zehir et al. (2014) also examined the direct relationship between charismatic leadership and organizational citizenship behaviors, the result reveal the charismatic leadership had a very strong direct effect in improving organizational citizenship behaviors.

From the above argument, the researcher proposed the hypothesis:

H5: Charismatic leadership will positively relate to organizational citizenship behaviors.

METHODS OF RESEARCH

This research was conducted in November 2018 in Jakarta using the causality research method to see the relationships between variables. The analytical tool used is Structural Equation Model (SEM) Lisrel. Therefore, the minimum samples are five times from the total number of statements analyzed according to Hair et al. (2014). The research questionnaire contained 19 statements; hence, the minimum number of samples needed was 95 respondents. In this research, the respondents are 110 employees who had been worked for more than two years. The variable of research is focused on charismatic leadership, job satisfaction, turnover intentions and organizational citizenship behaviors. The data measurement method was adopted Likert scale with one to five scale intervals.

In this study there is one exogenous variable which is charismatic leadership and three endogenous variables, which are job satisfaction, turnover intentions and organizational citizenship behaviors. Measurement of charismatic leadership variables using the dimensions of Conger et al. (1997) which consists of strategic vision and articulation, sensitivity to environment and members needs, personal risk, and unconventional behavior; of which the researcher only focus on the dimensions of strategic vision and articulation. On the other hand, job satisfaction variables that had been used is the dimensions apply DeVaney & Chen (2003) which consist of attitude, pay, stress, job security, colleague, company policy and support, and promotion. However, the researcher only focuses on the dimensions of attitude and colleague. The turnover intentions variable adopts the Keaveney (1992) indicator which consists of 4 indicators. Moreover, the researcher apply Van Dyne et al dimension (1994) for the organizational behaviour, which consists of loyalty, obedience, and

participation; however the researcher only highlight the dimension of loyalty. Lastly, all the measurements were consolidated in the questionnaires and tested the validity and reliability.

Validity test had done by Confirmatory Factor Analysis, with the value of Kaiser-Meyer-Olkin Measure of Sampling (KMO) and Measures of Sampling Adequacy (MSA). In this test, the value obtained must be greater than 0.500 which means that factor analysis is sufficient to observe, and can be further processed (Doll et al., 1994). The charismatic leadership's scale consists of 7 statements (all valid); on the otherhand, the turnover intentions scale consists of 4 questions (all valid). In addition, the job satisfaction scale consists of 6 statements, which consist of 2 invalid statements, since the component matrix is more than one JS1 (0.450) and JS3 (0.579). While the scale of organizational citizenship behaviors consists of 5 statements including 1 invalid statement is OCB4 (0.501). Since the Cronbach Alpha reliability test is greater than > 0.5; it means the data is reliable (Sugiyono, 2012), thus these indicators of all variables are trusted data in this research. The next step, the researcher processed the data with Structural Equation Modeling (SEM) analysis method. SEM is able to explain the relationship of complex variables with their direct or indirect effects on one or several variables towards other variables (Hair et al., 2014).

RESULTS AND DISCUSSION

In using SEM analysis, we also have to see compatibility of the whole model (goodness of fit). Based on that analysis, it is found that almost all results are compatible in good fit. This indicated that good fit is the result of compatibility in accordance with the values referred, while marginal fit is the result of compatibility under the values referred. Several tests were done in order to show sufficient compatibility, they were Chi-Square, RMSEA, ECVI, AIC, and CAIC, Fit Index and goodness of fit. There is a marginal fit result for Critical N. From the abovementioned results, it can be concluded that goodness of fit model is qualified

Table 1 – Hypotheses testing results

Hypotheses	Hypotheses statement	T-Value	Detail
H1	Charismatic leadership will positively relate to job satisfaction	3,12	Data support the hypothesis
H2	Job satisfaction will negatively relate to turnover intentions	1,08	Data not support the hypothesis
H3	Job satisfaction will positively relate to organizational citizenship behaviors	2,50	Data support the hypothesis
H4	Charismatic leadership will negatively relate to turnover intentions	0,71	Data not support the hypothesis
H5	Charismatic leadership will positively relate to organizational citizenship behaviors	2,61	Data support the hypothesis

The results of testing the first hypothesis (H1) found that the data supports the hypothesis with a t-value of 3.12. It shows the charismatic leadership can increase job satisfaction. The results of this study are in line with research conducted by Lindblom et al. (2016); of which the charismatic leadership has a strong positive impact on job satisfaction. In addition, the results of this research also reinforce previous research conducted by Vlachos et al. (2013) that reveal the charismatic leadership is able to provide employees with strategic goals and inspiring visions. Therefore, the results of its achievement lead to higher job satisfaction.

The results of testing the second hypothesis (H2) found that the data did not support the hypothesis with a t-value of 1.08, which is high level of job satisfaction can reduce turnover intentions. The results of this study are different from previous studies conducted by Y. Zhang & Feng (2011); Arfian & Anindita (2017); Lee et al. (2017); Shu et al. (2018) which mentions the effect of job satisfaction on turnover intentions. The difference findings on this research may be the researcher did not taking the overall dimensions of job satisfaction DeVaney & Chen (2003). Another finding is, the employees may feel high level of job

satisfaction, but because the salary is quite low, he or she may consider an alternative offer with a competitive salary. In addition, it is likely that employees with high level job satisfaction but without promotion, he or she may consider to work at another companies that give them higher promotions and wages.

The results of testing the third hypothesis (H3) found that the data supports the hypothesis with a t-value of 2.50, which is high level job satisfaction can improve organizational citizenship behaviors. The results of this study are in line with the research conducted by Basirudin et al. (2016); Foote & Tang (2008); Ertürk et al. (2004) that job satisfaction significantly increases organizational citizenship behaviors.

The results of testing the fourth hypothesis (H4) found that the data did not support the hypothesis with a t-value of 0.71, which was charismatic leadership can reduce turnover intentions. The results of this study are different from previous studies conducted by Lindblom et al. (2016); Wu & Wang (2012) which states that charismatic leadership has a significant negative impact on turnover intentions. These results are directly proportional to the employees studied feeling comfortable working under charismatic leaders, thus, even though there are better alternatives, the employee will choose to stay. Whereas, the results of this study differ from previous studies since the researcher did not take all dimensions of charismatic leadership (Conger et al., 1997).

The results of testing the fifth hypothesis (H5) found that the data supported the hypothesis with a t-value of 2.61, that charismatic leadership can improve organizational citizenship behaviors. The results of this study are in line with the research conducted by Babcock-Roberson & Strickland (2010); Zehir et al. (2014) that the charismatic leadership was significantly positive on organizational citizenship behaviors. When a leader shows sensitivity to the needs and feelings of organizational members, sets strategic and inspire to achieve organizational goals, employees tend to show citizenship behaviors. In addition, when charismatic leaders build positive and mutual relationships with employees, employees will voluntarily aspire each other.

CONCLUSION

This study examined the influence of charismatic leadership on job satisfaction, turnover intentions and organizational citizenship behaviors. This study uses the analysis of Structural Equation Model (SEM) Lisrel. The results that can be concluded from this study are: (i) charismatic leadership positively influences employee job satisfaction, which means that charismatic leadership improves employee job satisfaction (the first hypothesis is supported); (ii) job satisfaction negatively affects turnover intentions significantly. High job satisfaction reduces turnover intentions (second hypothesis is not supported); (iii) job satisfaction positively influences the organizational citizenship behaviors. High job satisfaction will enhance organizational citizenship behaviors (third hypothesis supported); (iv) charismatic leadership significantly affects turnover intentions, which means charismatic leadership reduces turnover intentions (fourth hypothesis is not supported); and (v) charismatic leadership positively influences organizational citizenship behaviors. Lastly, charismatic leadership enhances organizational citizenship behavior (the fifth hypothesis is supported).

This study has several limitations that can be considered for further research. This study only carried out in Jakarta from varied nature of companies and respondents who have two years work experiences. This study uses a questionnaire as a measurement tool with the aim of saving time and effort. Therefore, there is a possibility that the respondent did not fill in the questionnaire with the actual answer or only filled in based on the ideal conditions expected and not the conditions that were happening. This can cause the measurements do not describe the actual variables. In addition, the limitations of the variables examined in this study only discuss charismatic leadership with one dimension from five that must be researched, Moreover, the job satisfaction used only two dimensions from seven dimensions that must be examined. Lastly turnover intentions and organizational citizenship behaviors only applied one dimension of three dimensions that should examined.

This research is still very limited, because it has only done in Jakarta and the respondents are the employees who have two years experience. This research is also limited to examining the influence of charismatic leadership on job satisfaction, turnover intentions and organizational citizenship behaviors. Therefore, the researcher suggests the development of further research by adding those three variables. There are many other variables, besides charismatic leadership factors that can be maximizing those variables. In addition, future research is suggested to use all existing dimensions in each variable, to examine one type of company such as goods, services or manufacturing companies. Another suggestion is the location of the research is carried out in various cities, therefore the research outcome can be more optimal, objective and in accordance with the hypothesis that was stated from the beginning.

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TRANSFORMATIONAL LEADERSHIP STYLE AND WORK LIFE BALANCE: THE EFFECT ON EMPLOYEE SATISFACTION THROUGH EMPLOYEE ENGAGEMENT

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ABSTRACT

Leaders of any organization are expected to carry out tasks with limited resource to the maximum level in order to maintain the competitive edge and sustain profitability position of the organization. In other side, employees are looking for ways that will help them balance between work and personal life effectively. Successful organizations know that employee satisfaction, performance and employee engagement are crucial. The objective of this research is to analyze the impact of work life balance and transformational leadership style on employee satisfaction through employee engagement in Telco support Partner Company in Indonesia. The research used 150 field technicians as respondents. Data were analyzed using Lisrel-Structural Equation Model (SEM). The results showed that work live balance and the transformational leadership style influence the employee satisfaction.

KEY WORDS

Transformational leadership style, employee, satisfaction, employee engagement, work life balance.

Leadership in general may be defined as a process whereby leaders interact with their followers and influence the followers to achieve most desired organizational outcomes (Northouse, 2007). Leaders of any organization are expected to carry out tasks with limited resource to the maximum level in order to maintain the competitive edge and sustain profitability position of the organization (Riaz, A., & Haider, 2010). Leadership can thus be viewed as a process of influencing other people to act in ways that are in line with set organizational goals. Different styles of leadership have been identified in previous studies (Hirtz, P. D., Murray, S. L., & Riordan, 2007; House, Hanges, Javidan, Dorfman, & Gupta, 2004). The results of previous studies from different countries show that different styles of leadership do not have the same impact on job satisfaction (Stodgill, 1970).

One of the most prominent styles of leadership is Bass and Avolio's (1995) transactional and transformational styles of leadership (Bass, B., & Avolio, 1995) view transformational leadership as a kind of leadership that emphasizes on the followers' intrinsic satisfaction and personal growth. Transformational leaders seek to match followers' interests and needs with the most desired organizational outcomes and foster followers' commitment to the organization by inspiring them to go beyond their expected level of performance (B.M. Bass, 1998; Bernard M. & Bernard M., Riggio, 2006). In the context of this contemporary business environment which is highly complex and dynamic, transformational leaders are viewed as individuals who initiate change and inspire their followers during periods of environmental uncertainties. Since the early 1990s, transformational leadership style has been preferred over transactional leadership style (M. Bass & J. Avolio, 1990) because field technician demands leaders who inspire others with the vision of what can be accomplished (Efron, 2016).

Many changes in the workplaces and employee lives have created a challenge in balancing work life and personal life. This also leads to a complicated relationship between organization and its employees. Organizations are looking for better performance and productivity, whereas people are looking for enjoyment, pay, promotion and job satisfaction while maintaining their personal lives. The organization should apply work life balance

policies to achieve good results from their employees to have better performance and productive employees.

Interference between work and non-work responsibilities has a number of negative outcomes. In terms of job attitudes, employees reporting high levels of both work-to-life and life-to-work conflict tend to exhibit lower levels of job satisfaction and organizational commitment (Ernst Kossek & Ozeki, 1998; Scandura & Lankau, 1997). Both work-to-life and life-to-work conflict have also been associated with increased stress and burnout (Anderson, Coffey, & Byerly, 2002; Kinnunen & Mauno, 1998), cognitive difficulties such as staying awake, lack of concentration, and low alertness (Macewen & Barling, 1994), as well as reduced levels of general health and energy (Frone, Russell, & Cooper, 1993). Beauregard & Henry (2009b) suggested that work life balance practices depend on attracting better applicants and reducing work-life conflict, hence, it enhances organizational performance. S. Fleetwood (2007) found that work life balance policies and practices reap benefits to the organization that can be measured financially, namely, increased productivity, lower absenteeism, reduced overheads, improved recruitment and retention.

Job satisfaction is how people feel about their job. It depends on the extent to which people are satisfied or dissatisfied with their job. Diaz-Serrano & Vieira (2005) identified that job satisfaction is an important predictor of overall well-being and employee intentions to quit. As a result, there is a relationship between job satisfaction and employee retention (Arthur, 2004). Job satisfaction is a positive outcome of work life balance (Sousa-Poza & Sousa-Poza, 2000). Polzer-Debruyne (2007) suggested that when an employee perceives that his/her employer is supportive and is helpful in integrating family and work related issues, it results in a higher level of job satisfaction and organization commitment.

Engaged employee is also a satisfied employee; few people are willing to go the extra mile for their employer unless they are fundamentally happy in their jobs. However, it is certainly possible to have a satisfied employee with a low engagement level - someone who shows up to work and goes through the motions, but does not demonstrate a lot of initiative or put in a lot of extra effort to further the success of the organization. That's why focusing on satisfaction without addressing engagement is unlikely to foster the kind of exceptional workforce performance that drives business results (Swarnalatha & Prasanna, 2014).

The objective of this study is to find the impact of work life balance and transformational leadership style into employee satisfaction through employee engagement.

LITERATURE REVIEW

Leadership style is defined as the pattern of behaviors that leaders display during their work with and through others (Hersey, Blanchard, & Johnson, 1996). Miller (2005) view leadership style as the pattern of interactions between leaders and subordinates. Leadership styles are not something to be tried on like so many suits, to see which fits. Rather, they should be adapted to the particular demands of the situation, the particular requirements of the people involved and the particular challenges facing the organization.

Bass M. & Avolio J. (1990) defined transformational leadership as the ability to motivate followers to perform beyond what he/she would normally expect. Bachtiar and Amar (2014) defined transformational leadership as a type of leadership that guides or motivates their followers in the direction of enforced goals by clarifying roles and task demands, and other researchers defined transformational leadership as the ability to motivate and to encourage intellectual stimulation through inspiration (Avolio Bruce, Weichun, William, & Puja, 2004).

Transformational leadership refers to the leader moving the follower beyond immediate self-interests through idealized influence (charisma), inspiration, intellectual stimulation, or individualized consideration. It elevates the follower's level of maturity and ideals as well as concerns for achievement, selfactualization, and the well-being of others, the organization, and society (Bernard M. Bass, 1999). Idealized influence is exhibited when followers respect and trust their leaders and want to be like them, also the leader tends to put his/her followers' needs over their own. Inspirational motivation is when a leader acts in a way that causes

people around him/her to be motivated to work better, usually caused by the leader instilling a sense of meaning in the work for the follower. Individualized consideration is shown when a leader gives attention to each employee and is concerned with his/her individual needs. The leader is generally seen as a coach or a mentor. Intellectual stimulation is demonstrated when a leader asks questions to try and increase productivity and innovation.

Felstead et al. (2002) defines work-life balance as the relationship between the institutional and cultural times and spaces of work and non-work in societies where income is predominantly generated and distributed through lab. Aycan et al. (2008) confined the subject only with work and family and put forward the concept of "life balance" with a more whole perspective. Scholars defined life balance as fulfilling the demands satisfactorily in the three basic areas of life; namely, work, family and private. Work demands work hours, work intensity and proportion of working hours spent in work. Additional work hours subtract from home time, while high work intensity or work pressure may result in fatigue, anxiety or other adverse physiological consequences that affect the quality of home and family life (Aycan et al., 2008). She explores the interface between work and family at different types of institutions from the perspective of women faculty who are on the tenure track and who are mothers of young children. Such a perspective provides insight into institutional variation on academic life in general, and for new faculty as mothers, in particular. A macro-view of the findings points to two major concerns, namely, time (and lack thereof) and its impact on the ideal worker norms that shape what it means to be a good mother and good professor at different institutional types, as well as, the idea of 'choice' as an illusion.

Gibbons (2006) defined employee engagement as a heightened emotional and intellectual connection that an employee has for his/her job, organization, manager, or co-workers that in turn influences him/her to apply additional discretionary effort to his/her work. Hewitt and Associates (Associates, 2004) defined engagement as a measure of the energy and passion that employees have for their organizations. Engaged employees are individuals who take action to improve business results for their organizations.

The more highly engaged the employee, the more likely he or she will be to say positive things about the organization, thereby contributing to the development of a positive employer brand; want to remain within the organization, thereby minimizing turnover; and regularly exert a superior level of effort, thereby potentially influencing such variables as service quality, customer satisfaction, productivity, sales, and profitability, performance (Anindita & Emilia Seda, 2018).

The concept of Job Satisfaction was widely discussed by various researchers. The most popular definition was provided by Locke (1976), where Job Satisfaction is simply a positive emotional state of feeling resulted from jobs, thus fulfill individuals' value towards their jobs. This definition further suggests that job satisfaction contains an affective component (emotional state) and cognitive component (appraisal) of Job Satisfaction (Organ, D. W., & Kovovsky, 1989). Affective Job Satisfaction states the individual's immediate feeling state towards job-related factors. It is the extent of pleasurable emotional feelings individuals have about their jobs overall. The positive emotional of feeling may include feeling good about the job individual being delegated, and the particular feeling is experienced from their appraised work performance, recognized professions, and even completion of work task (Megginson, Mosley, & Paul H. Pietri, 1983).

According to Kreitner and Kinicki (2014), job satisfaction is an effectiveness or an emotional response to various aspects of work. Davis (1993) describes job satisfaction as a set of employee feelings about whether or not their work is fun. Job satisfaction can be measured by the employment dimensions: salary, opportunity for promotion, supervision and co-workers (Munadar, Smith, Kendall and Hulin, 2004).

HYPOTHESES DEVELOPMENT

It is very important for an employee to feel engaged. An engaged employee, who feels valued at work, feels that the game is fair, tends to be more productive (more output for less input) than the rest. A happy and engaged employee might be able to deliver more in less

time and successfully achieve a work-life balance. As per experts, sense of achievement is as important as sense of enjoyment. Some days one achieves more, while on other days one enjoys more. Striking a balance between the two helps employees excel professionally as well as personally. But how does one strike this balance? The person most responsible for this is the employee himself; however, the employer can also play a key role in ensuring both are achieved at acceptable levels. Companies must find ways to keep employees happy while they are working and get enough time for family, friends and recreation. Work-life balance is not the allocation of time equally among work, family and personal demands. In literature, it is also emphasized that work-life balance is a subjective phenomenon that changes from person to person. In this regard, work-life balance should be regarded as allocating the available resources like time, thought and labor wisely among the elements of life. While some adopt the philosophy of 'working to live' and see work as the objective, others consider "living to work" and situate work into the centre of life. Employees who perceive a balance between their work and private lives are likely to experience positive emotions and attitudes such as engagement (Beauregard & Henry, 2009a). The results of a study by Richman, Civian, Shannon, Hill, and Brennan (2008) have revealed that supportive work-life policies and perceived flexibility are positively related to employee engagement. In addition, a study by Sonnentag (2003) has suggested that recovery, which can be seen as a part of work-life balance, can contribute to employees' work engagement.

From the above argument, the researcher proposed the hypothesis:

H₁: Good Work Life Balance will increase employee engagement.

Zhang (2010) conducted a study on the relationship between perceived leadership style and employee engagement among 439 sales assistants in Sydney Australia. The results showed that employee engagement is associated with an employees' perception of leadership style in his or her direct supervisor, negatively when classical or transactional leadership styles are perceived and positively in the case of visionary or organic leadership. More over three employee characteristics moderated the relationship between the perceived leadership style and employee engagement in different ways. Chung, et.al (2009) also conducted a study on Taiwanese hotel industry and found that the leaders in this industry exercised transformational leadership with employees believing that their managers emphasized high quality performance.

Bakker and Schaufeli (2008) found that employees who have positive interactions with their managers have increased levels of engagement. Additionally, Walumbwa, Orwa, Wang, and Lawler ((2005) found that using a transformational leadership style leads to increased organizational commitment and job satisfaction, and still Cartwright and Holmes (2006) found that leaders who focus on relationship building and trust development increase engagement levels. Transformational leaders are not viewed as a power figure but as mutual support for a common purpose, the collective good of an organization. From this perspective, transformational leaders have the capacity to directly impact the engagement levels of their employees (Nohria, Groysberg, & Lee, 2008) and are able to meet the human and work needs of their employees, a dividend of a very unique and empowering style.

From the above argument, the researcher proposed the hypothesis:

H₂: Good Transformational Leadership style will increase employee engagement.

Vorina et al. (2017) confirm that the relationship between employee engagement and job satisfaction is positive and statistically significant. Kim-Soon & Manikayasagam (2015) found that through providing employee engagement opportunities, a company will improve employee job satisfaction. Engaged employee leads to higher job satisfaction.

From the above argument, the researcher proposed the hypothesis:

H₃: Good employee engagement will increase employee job satisfaction.

Organizational commitment and job satisfaction are important attitudes in assessing employees' intention to quit and the overall contribution of the employee to the organization (Lok, P., & Crawford, 2004). Job satisfaction is influenced by many organizational contextual factors, ranging from salaries, job autonomy, job security, workplace flexibility, to leadership. In Sectionicular, leaders within organizations can adopt appropriate leadership styles to affect employee job satisfaction, commitment and productivity. Employee job satisfaction

refers to the attitude of employees towards their jobs and the organization which employs them (Voon, M. L., & Ayob, 2011).

Attaining employees' job satisfaction is crucial to retain productive and efficient employees. Therefore, one of the ways that may be effective help managers in increasing the satisfaction among their followers is employing the right leadership style. An effective leader is one that command respect and trust by their followers. Sang Long, et.al (2014) found that only one of the four transformational leadership characteristics have significant relationship with job satisfaction. Characteristic of *individualized consideration* is found to be contributed most in job satisfaction.

From the above argument, the researcher proposed the hypothesis:

H₄: Good Transformational Leadership style will increase employee job satisfaction.

Saif et al.(2011) conducted research in Pakistan to analyze relationship work life balance practices have with job satisfaction. The results reveal that work life balance practices and level of job satisfaction share a Positive relationship. Rani et al. (2011) conducted the study to evaluate the relationship between work life balance and employees satisfaction. Results indicated job satisfaction have positive relationship with work life balance and negative relationship with work recognition, relationship with subordinate & supervisor and task at work.

Varatharaj&Vasanth (2012) conducted the study to examine relationship job satisfaction have with work life balance in women. Result shows strong positive relationship exists between job satisfaction and work life balance.

From the above argument, the researcher proposed the hypothesis:

H₅: Good Work Life Balance will increase employee job satisfaction.

METHODS OF RESEARCH

This research was conducted on the field technician of Telco Support partner in Indonesia. The aspects studied were transformational leadership style, work life balance, employee engagement, and job satisfaction. The study was conducted in August 2018 by survey method. This research is descriptive and collected using questionnaire.

Data analysis using Structural Equation Modeling (SEM) with total 150 respondents and with four variables; transformational leadership style, work life balance, employee engagement, and job satisfaction. The data has been collected and then experienced Likert scale measurement with a scale of one to five (Sugiyono, 2012). The results of the analysis were then interpreted and the final step was to conclude and give a suggestion.

In this research, there were three independent variables, i.e. transformational leadership style, work life balance, employee engagement and one dependent variable, i.e. employee satisfaction. Measurement of transformational leadership style variable used the theory of Avolio and Bass (2004), the measurement of work life balance used *Psychometric Assessment of an Instrument Designed to Measure Work Life Balance by Jeremy Hayman* (2005), measurement of employee engagement variable used Work and Well-Being Survey (UWES-9) reported by Schaufeli, Bakker, and Salanova (2006) and the measurement of job satisfaction variable used *Psychometric Assessment by Corner and others* (2003).

RESULTS AND DISCUSSION

The testing result of first hypothesis (H₁) found that the result of analysis supported H₂ hypothesis that good work life balance will increase employee engagement of 3.87. It's confirm the results of Sonnentag (2003); Richman, Civian, Shannon, Hill, and Brennan (2008) that work live balance contribute to employee engagement.

The result of the second hypothesis testing (H₂) found that the result of analysis supported H₂ hypothesis that good transformational leadership style will increase employee engagement which was equal to 2.65. The results of this study affirmed the results of Bakker and Schaufeli (2008); Lawler ((2005); Cartwright and Holmes (2006); Nohria, et al. (2008) that transformational leadership style impacts the engagement levels.

Table 1 – Hypotheses testing results

<i>Hypothesis</i>	<i>Hypothesis statement</i>	<i>T-Value</i>	<i>Details</i>
H ₁	Good Work Life Balance will increase employee engagement	3.87	Data support hypothesis
H ₂	Good transformational leadership style will increase employee engagement.	2.65	Data support hypothesis
H ₃	Good employee engagement will increase job satisfaction.	6.4	Data support hypothesis
H ₄	Good transformational leadership style will increase employee job satisfaction.	6.78	Data support hypothesis
H ₅	Good Work Life Balance will increase employee job satisfaction	2.65	Data support hypothesis

The result of the third hypothesis testing (H₃) found that the result of analysis supported H₃ hypothesis that good employee engagement will increase employee job satisfaction of 6.4. The results of this study affirmed the results of Vorina et al. (2017); Kim-Soon & Manikayasagam (2015) that engaged employee leads to higher job satisfaction.

The result of the fourth hypothesis testing (H₄) found that the result of analysis supported H₄ hypothesis that good transformational leadership style will increase employee job satisfaction of 6.78. The results of this study affirmed the results of (Lok, P., & Crawford, 2004); Voon, et al. (2011); Sang Long, et.al (2014) that transformational leadership style have significant relationship with job satisfaction.

The result of the fifth hypothesis testing (H₅) found that the result of analysis supported H₅ hypothesis that more work life balance will increase employee job satisfaction of 2.65. The results of this study affirmed the results of Saif et al.(2011);Rani et al.(2011); Varatharaj & Vasantha (2012) that strong positive relationship exists between job satisfaction and work life balance.

Based on variable analysis, the result of hypothesis testing showed that employee engagement mediated work live balance with employee satisfaction, and mediated transformational leadership style with employee satisfaction in both direct and indirect ways. It can be said that employee engagement act as partial mediation.

CONCLUSION

The results that can be concluded from this research: (1) there is an influence of leadership style on employee engagement, it can be said that good transformational leadership style will increase employee engagement; (2) there is an influence of work life balance on employee engagement, it can be said that good work life balance will increase employee engagement; (3) there is an influence of employee engagement on employee job satisfaction, engaged employee leads to higher job satisfaction; (4) there is an influence of work transformational leadership style on employee job satisfaction, it can be said that good transformational leadership style will increase employee job satisfaction; (5) There is an influence of work life balance on employee job satisfaction, it can be said that good work life balance will increase employee job satisfaction.

In this research there are several limitations: (1) this study was conducted at a company with have several branches around Indonesia and have homogeneous business line; (2) the object of this research came from several big cities with different culture that influencing in fulfilling questionnaire; (3) this study not use all dimensions in each variable.

Variables for model development can be add to find another perspective that affect employee job satisfaction through employee engagement. Research object could be taking from several companies with different business line to make it more universal.

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THE EFFECT OF LEARNING GOAL ORIENTATION ON SELF-PERCEIVED EMPLOYABILITY WITH CAREER ADAPTABILITY AS A MEDIATOR

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ABSTRACT

Learning goal orientation is an individual characteristic that relatively stable and characterized by efforts to develop competence and perseverance in the face of obstacles (Dweck, 1986). A study shows that learning goal orientation is related to career adaptability (Tolentino et al., 2014), but few studies shows the relationship between learning goal orientation and career outcomes such as self-perceived employability. This study investigates the role of career adaptability on mediating the effect of learning goal orientation and self-perceived employability. Participants of this study were 69 college students from various disciplines and several universities in Indonesia. Data were collected using Learning Goal Orientation scale (Button et al., 1996), The Career Adapt-Abilities Scales Form 2.0 (Savickas & Profeli, 2012), and Student Self-Perceived Employability (Rothwell et al., 2009). Overall, the findings of this study show that career adaptability plays a mediating role in the effect of learning goal orientation on self-perceived employability.

KEY WORDS

Learning goal orientation, career, adaptability, self-perceived employability.

Industrial revolution era 4.0 not only creating new opportunities but also challenges for individuals to increase competitiveness to be able to adapt to the needs in this era. Changes in this era will provide many new job opportunities that will replace some types of work that are not in line with the development. Over the next 15 years, all countries will face large-scale labor transitions because automation replaces some jobs and labor demand will also shift (Manyika et al., 2017). In dealing with this change, the workforce is required to have adequate skills so that they can compete and adapt to the demands of the world of work.

College students are individuals who will enter the workforce. Global trends show that young people are the most vulnerable to employment crises (ILO, 2013; Tolentino et al., 2014). New graduates often find it difficult to enter the labor market and get suitable jobs because of the lack of work experience or professional relations (Koen et al., 2012). Challenges and competition in the world of work today require college students to have the ability to obtain the desired work (employability). Rothwell and Arnold (2007) define employability as the individual's ability to get and keep his job. Employability is one result of a person's ability to adapt to environmental demands (adaptation result).

To be able to adapt well, individuals need willingness and readiness in the face of change. In career construction theory, the individual's readiness to change and the willingness to deal with career uncertainty with appropriate responses is called adaptivity (Savickas & Profeli, 2012). Adaptivity can be measured in various indicators, such as learning goal orientation, proactivity, career optimism, and big five personality characteristic (Rudolph et al., 2017). In this study, adaptivity was measured using individual self-regulation indicators, that is learning goal orientation. Individuals who have high learning goal orientation have adaptive response patterns such as persistence, increasing effort in achieving goals, and enjoying challenges (Yi & Hwang, 2003). Veiga and Turban (2014) explain that individuals who focus on learning goal orientation have better self-regulation during the process of finding work and are more successful in finding work.

Many studies have examined the relationship between adaptivity and career outcomes, but there are still few studies that examine the role of mediators in these relationships.

Savickas and Profeli (2012) assume that the relationship between adaptivity and adapting responses can be mediated by career adaptability. Rossie (2015; Udayar et al., 2018) explains the role of career adaptability in mediating the relationship between individual dispositions in career behaviors, where career adaptability can generate strong adaptive functions that allow dispositions to fit with environmental characteristics. Based on this explanation, this study aims to examine the role of career adaptability in mediating the relationship between learning goal orientation and self-perceived employability in college students.

LITERATURE REVIEW

Learning goal orientation is an individual characteristic that relatively stable and characterized by efforts to develop competence and perseverance in the face of obstacles (Dweck, 1986). Button et al. (1996) explain that there are some indicators of individuals who have learning goal orientation that is involved in challenging activities, have a desire to develop themselves and tendency to use the past performance as a standard evaluation of current performance. Individuals with learning goal orientation view intelligence as a flexible trait that can be developed continuously through experiences and effort. Learning goal orientation individuals attempt to develop their ability, overcome obstacles, and improve competency (Creed et al., 2009).

Career adaptability is a psychosocial construct that indicates individual resources in overcoming and anticipating tasks, transitions, and traumas in the occupational role that change individual's social life on a small or large scale (Savickas & Profeli, 2012). Career adaptability resources including attention about the future (concern), discipline and responsibility in making decisions regarding the future (control), curiosity to find information about opportunities (curiosity), and individual confidence in solving problems and doing everything needed to overcome obstacles (confidence).

Employability in general, defined as individual capability to obtain and maintain a desirable job (Rothwell & Arnold, 2007). Employability can be conceptualized as antecedent or outcomes. Antecedent approach view employability as an ability, skill, attitude, and behavior that help individuals to a new job or maintaining their current job (Fugate et al., 2004; Van Dam, 2004). On the other hand, the outcome approach review employability subjectively by asking individuals to assess their chances of obtaining and maintaining employment or what is referred to as self-perceived employability (De Cuyper et al., 2011; Rothwell & Arnold, 2007).

Rudolph et al. (2017) explain that each individual has different willingness (adaptivity) and ability (career adaptability) in developing beliefs and showing behaviors (adapting responses) in the face of changing environmental conditions, which will also affect the suitability or positive integration of their work role (adaptation result). Individuals who have willingness to involve in adaptation behavior can bring out the resources needed to deal with changing situations (Savickas & Profeli, 2012). Individual's adaptivity affects career adaptability, which also influences adaptation responses and adaptation outcomes (Rudolph et al., 2017).

CONCEPTUAL FRAMEWORK

Based on the theoretical explanation that has been described, this study aims to examine the indirect effects of learning goal orientation (adaptivity) on self-perceived employability (adaptation result) through career adaptability. A study conducted by Tolentino et al. (2014) found that learning goal orientation relates positively with four dimensions of career adaptability, that is concern, control, curiosity, and confidence. Other study found that career adaptability relates to self-perceived employability (Rudolph et al., 2017; Udayar et al., 2018). Therefore, the hypothesis of this study is career adaptability will mediate the relationship between learning goal orientation and self-perceived employability.

METHODS OF RESEARCH

Participants in this study consist of 69 college students from several universities in Indonesia, with as much as 50,7% of bachelor and 49,3% of master students from various disciplines. The age of participants varies between 21-30 years and dominated by women, namely as many as 58 people or 84,1% of the total participants.

Learning goal orientation was measured by Learning Goal Orientation Scale, developed by Button et al. (1996) that consist of 8 items measuring learning goal orientation indicators. Career adaptability was measured by The Career Adapt-Abilities Scales Form 2.0 (CAAS), developed by Savickas and Profeli (2012). CAAS scale consists of 24 items measuring four dimensions of career adaptability with each dimension represented by 6 items. Self-perceived employability was measured by Student Self-Perceived Employability, developed by Rothwell et al. (2009) that consists of 16 items measuring hope and self-perceptions about employability on college students.

RESULTS OF STUDY

In this study, data were analyzed using simple linear regression test and multiple linear regression test techniques. Before conducting a regression analysis, researchers tested the correlation between variables.

Table 1 – Correlation Statistics Results

n/n	Variable	1	2	3
1	Learning goal orientation	1	0.508	0.333
2	Career Adaptability	0.508	1	0.526
3	Self-perceived employability	0.333	0.526	1

Based on the correlation test results, the three correlation results in this study are classified as significant with significance value of less than 0,05 at a significance level of 5%. The strength of the correlation between learning goal orientation variable with career adaptability is high, which is equal to 0,508. The strength of the correlation between learning goal orientation and self-perceived employability is classified as moderate, which is equal to 0,333. While the strength of the correlation between career adaptability and self-perceived employability is high, amounting to 0,526. The correlation value of all variables shows a positive correlation so that when learning goal orientation increases, career adaptability and self-perceived employability will also increase. Likewise, if career adaptability increases, learning goal orientation and self-perceived employability will also increase.

Table 2 – Regression Analysis Results

n/n	Regression Model	R Square	B Value	Beta	Sig.	Information
1	$X \rightarrow Y$	0.111	0.444	0.333	0.000	Significant
2	$X \rightarrow Z$	0.258	1.122	0.508	0.000	Significant
3	$X \& Z \rightarrow Y$	0.283	0.118 (X) 0.290 (Z)	0.089 0.481	0.466 0.000	Not significant Significant

After conducting a correlation test, researchers conducted a mediation test. Baron and Kenny (1986) explain that the role of mediator on the influence of independent and dependent variables will be fulfilled if they are in three conditions, that is (1) the value of predictor estimation from regression of dependent variable (Y) with independent variable (X) is expected that the result is significant; (2) the value of the predictor estimation from the regression of mediator variable (Z) with independent variable (X) is expected to have a significant result; (3) the results of the regression of dependent variable (Y) with independent variable (X) with mediator variable (Z) as predictors are significant, while the value of X on Y is not significant. Perfect mediation will be obtained if the magnitude of the influence of the

independent variable (X) on the dependent variable (Y) in the third equation is smaller than the effect of the two in the first equation.

Based on table 2, it can be seen that the results of the regression analysis meet the first and second conditions, where the value obtained is significant with an estimated predictor value of 0.444 and 0.122. In the third condition, the mediator variable is proven to affect the dependent variable with the control of the independent variable. This can be seen from the results of multiple regression of X on Y which is not significant, with a significance level of 0.466 with an estimated predictor value of 0.118. The multiple regression results of Z on Y show a significance level of 0.000 with estimated predictor value of 0.290. The estimated predictor value of X on Y in the third equation is proven to be smaller than the first equation, which is equal to 0.089. Thus, the hypothesis in this study which stated that career adaptability will mediate the relationship between learning goal orientation and self-perceived employability is accepted and is a perfect mediation.

DISCUSSION OF RESULTS

This study aims to determine the effect of learning goal orientation on self-perceived employability with career adaptability as a mediator. The results of the regression analysis using the Baron and Kenny mediation tests show that career adaptability acts as a mediator in the influence of learning goal orientation on self-perceived employability.

The results of the first equation in the mediation test analysis show that learning goal orientation affects self-perceived employability. However, this influence tends to be low so it is proven that the relationship between learning goal orientation and self-perceived employability requires other variables to strengthen the relationship between the two. This shows that even though students have an effort to continue to develop competence and persevere in facing challenges, they are not necessarily able to get the desired job.

The results of the second equation show that learning goal orientation influences career adaptability. This is aligned with the study conducted by Tolentino et al (2014), where individuals who have learning goal orientation tend to develop career adaptability resources to increase their competencies and survive in facing obstacles. Individuals who continue to strive to develop competencies will be more motivated to think and prepare for their future (concern), improve discipline and responsibility in making career decisions (control), explore and look for opportunities (curiosity), and be more confident in solving problems (confidence).

The third equation shows that the influence of learning goal orientation on self-perceived employability will be stronger if mediated by career adaptability. The results of this study prove that when individuals try to continue to develop their competencies, they will also be better prepared to face all the demands of the role. When individuals are better prepared to face all demands, the individual also feels better able to get the desired job.

CONCLUSION

Based on the results of this study, it can be concluded that career adaptability plays a mediating role in the effect of learning goal orientation on self-perceived employability. Individuals who are always trying to develop their competencies will be better able to carry out adaptive actions so that they will also perceive that they can get the desired job. That way, the hypothesis in this study is accepted. The results of this study also show that there is a positive relationship between learning goal orientation with career adaptability and self-perceived employability.

With the limitations of generalizations in this study, further research is expected to replicate studies in samples that are more diverse in terms of geographical area, the field of study or profession, and career stages. Further research can also consider other variables that act as mediators in the influence between learning goal orientation and self-perceived employability.

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THE EFFECT OF PSYCHOLOGICAL CAPITAL ON WORK ENGAGEMENT WITH JOB CRAFTING AS A MEDIATOR VARIABLE AMONG GENERATION Y EMPLOYEES

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ABSTRACT

This study aims to examine whether there is a psychological capital effect on work engagement with job crafting as a mediator variable in Generation Y employees. The definition of work engagement in this study refers to the theory revealed by Schaufeli, et al. (2002), psychological capital using the Luthans theory, et al. (2004), and job crafting using the theory of Tims, et al. (2011). The subjects in this study were 82 people with the criteria of individuals who were working and aged 20 to 36 years. The scale used in this study is the Utrecht Work Engagement Scales (UWES) which consists of 15 items, Job Crafting Scales (JCS) which consist of 18 items, and the PsyCap Questionnaire (PCS) which consists of 24 items. Data analysis use simple and multiple linear regression methods based on the mediation test analysis techniques of Baron and Kenny (1986). The results of the analysis show that job crafting mediates the influence of psychological capital on work engagement on Generation Y employees.

KEY WORDS

Job crafting, work engagement, generation Y employees.

The workforce in an organization will always change and be dynamic as employees retire and are replaced by employees of the new generation (Ozcelik, 2015). In the company there are four generations, including Silent Generation or commonly known as Traditionalist where these people were born in 1925-1945, Baby Boomers born in 1946-1964, Generation X who were born in 1965-1981, and Generation Y or Millennials born in 1982-1999 (Schullery, 2013). In 2014, 36% of Generation Y has entered the workforce, and there is a possibility that in 2020 46% of Generation Y will dominate the workforce (Park & Gursoy, 2012). In this era, Indonesia is experiencing increasingly fierce competition to get generation Y human resources because this generation prefers digital-based pilot businesses with attractive work cultures (Korporasi Bersaing Memikat Generasi Y, 2016). Characteristics of generation Y are different from the older generation who prefer to settle on their current work (Browning & Worman, 2008). There was a survey conducted by the University of California where 70% of generation Y planned to change jobs after the economy improved, 80% stated that they wanted direct feedback compared to traditional performance appraisal, 43% felt very confident that they will find another job if they quit or lose the current job, and 65% stated that self-development is the most influential factor in their current job (Kratz, 2013). According to Park and Gursoy (2012), generation Y has a tendency to two times larger than the generation X to quit his job after one year of working. High turnover in a company shows a low commitment to the organization, and indirectly it shows low work engagement. Halbesleben and Wheeler (2008) reveal that employees feel not engaged to their job because they do not get the opportunity to invest their energy in work, have low identification and meaning in their work so they will choose to leave the company. But still, organization really need this generation Y because they are considered the most intelligent, diligent, optimistic, confident, and is the homo sapiens that is most needed to face world challenges than other generations (Zemke et al., 2013).

Organization needs to pay attention on employee's work engagement because it is related to important business outcomes such as the willingness of employees to continue working in the company, productivity, profits, loyalty, and customer comfort. The more

employees have a high sense of attachment with the company; the business income will also increase (Rachmawati, 2013). In work engagement, there is energy and focus that is attached to the employees which makes them able to give full potential to their work. It can also improve the quality of responsibility and motivation to concentrate exclusively on what they are doing (Leiter & Bakker, 2010).

According to Vogt, et al (2016; Cenciotti, et al. 2017) in his research stated that there is a reciprocal relationship between work engagement, job crafting, and psychological capital. Psychological capital is a positive state of an individual characterized by self efficacy, optimism, hope and resilience. The four dimensions will direct individuals to be more attached to their work, such as working harder (vigor), feeling that work is meaningful and useful (dedication), and fully willing to focus on completing work (absorption) (Rostiana & Lihardja, 2013). One of the predictors that make employee will engaged to their work is job crafting, where individuals have the initiative to make changes to their work environment related to job demands and job resources (Tims, et al., 2011). And according to research that conducted by Cenciotti, et al. (2017) states that job crafting can increase a person's psychological capital.

Based on the explanation above, this study uses job crafting as a mediator variable in connecting psychological capital with work engagement. This research was conducted to prove the relationship of the three variables. Based on the explanation above, a question arises, whether the effect of psychological capital on work engagement on generation Y employees is mediated by job crafting.

LITERATURE REVIEW

Generation Y or Millenials are people born in 1982-1999. When baby boomers retire, this generation begins to enter the world of work (Reder et al., 2010 in Marais, 2013). During their growth, generation Y was heavily influenced by massive expansion of technology and mass media. Meirer and Crocker (2010) revealed that generation Y is different from the older generation who depend on their work, individuals from generation Y do not feel dependent and do not consider work as the most important thing in their lives.

Other than that, the characteristic of this generation is that they want to be respected and recognized by their workplace, they also always want to develop and learn. If they feel their work environment does not respect them, they will not hesitate to leave the organization (Hoole & Bonnema, 2015). Lutungan, et.al., (2014) also did a research and stated that this generation have some characteristic such as: 1) result oriented; 2) frontal communication behaviour; and 3) pay attention to social influences and prioritize job satisfaction.

Work engagement is assumed to be the opposite of burnout. Burnout is defined as fatigue, cynicism, and something that decreases one's efficacy (Maslach & Leiter, 1997, in Schaufeli & Bakker, 2003). Employee who engages feel encouraged and effectively connected with his work, they also see themselves as someone who is able to cope with the demands of the job well (Schaufeli & Bakker, 2003). Kahn (1990; Saks, 2006) defines attachment as someone's psychological presence when carrying out the role of the organization, which means that someone is really involved both physically, psychologically, emotionally, and cognitively when working. Rothbard (2001; Saks, 2006) stated that there are two critical things on engagement such as attention (availability of cognitive thinking and time to the roles carried out in the organization), and absorption (focus and sinking of someone in the role being carried out).

According to Schaufeli, et al. (2002), work engagement is defined as a a positive state of mind, full involvement in work characterized by enthusiasm, dedication, and absorption of work. Employees who are engaged will feel compelled to strive towards challenging goals and desires success. Work engagement reflect the energy of employees brought to work, they not only feel excited but also feel enthusiastic about using their energy in their work (Leiter & Bakker, 2010). Employees who engaged have desire to work hard, involve in the organization, and feel happy with their work (Taris, et al., 2010).

Work engagement has three dimensions, dedication and absorption (Schaufeli & Bakker, 2010). Vigor is characterized by high levels of energy and mental resilience while working, willingness to give effort on task, and persistent even though there is a difficulty. Dedication is characterized by full involvement in a job, having important feelings, enthusiasm, inspiration, pride, and feeling challenged. Absorption is characterized by full concentration and feeling happy when working, where employees will feel time flies and found it difficult to break away from work (Schaufeli & Bakker, 2010).

Work engagement is positively associated with job resources goals, and can improve growth, learning and development (Schaufeli & Salanova, 2007). Demerouti, et al. (2001; Schaufeli & Bakker, 2004) did a research about JD-R theory (Job Demand-Resources) and state that job demands like working hours or time pressure can cause fatigue, meanwhile lack of job resources such as feedback, social support, participation in decision making will cause disobedience. Not only job demands and resources, psychological capital is also a factor that influences work engagement. Psychological capital is a employee's positive state that characterized by self efficacy, optimism, hope, and resilience (Luthans et al., 2007; Sweetman & Luthans, 2010). The four psychological capital dimensions will produce and direct individuals to take useful actions to motivate someone to work harder (vigor), feel that their work is meaningful and (dedication), and fully willing to focus on completing their work (Rostiana & Lihardja, 2013). Bakker, et al., (2012) conducted a study and revealed a predictor that also significantly affects the work engagement, named Job Crafting. According to Tims, et al. (2012), job crafting is defined as the self-initiated changes that employees make in their own job demands and job resources to attain and/or optimize their personal (work) goals. Employees who show job crafting behaviour will be more attached to their jobs, because they proactively try to align their work conditions with their needs and abilities (Tims, et al., 2012).

Wrzesniewski and Dutton coined the term job crafting in 2001, but actually the idea of job crafting was already mentioned over 20 years ago by Kulik, Oldham, and Hackman in 1987. The research shows that employees could redesign the jobs on their own initiative with or without the involvement of management (Tims, et al., 2011). In job crafting, individuals physically and cognitively change the task and relationship in the workplace (Wrzesniewski & Dutton, 2001). The physical changes refer to the scope, shape, number of tasks, and relationships at work, while cognitive change refers to how a person changes perceptions about his work (Bakker et al., 2012).

According to Tims, et al. (2012), job crafting is defined as the self-initiated changes that employees make in their own job demands and job resources to attain and/or optimize their personal (work) goals. Berg and Dutton (2008, in Tims, et al., 2011) reveal that there is important point on job crafting where employees do not change the whole work, but they change certain aspects within specific task boundaries. For example, job crafting involved more autonomy which can encourage employees to feel more responsible for their performance, and consequently they will be more motivated to give effort to each task they do (Parker & Ohly, 2008; Tims et al., 2011).

Tims, et al. (2012, in Siddiqi, 2015) states that job crafting is divided into four categories of dimensions, such as increasing structural job resources, decreasing hindering job demands, increasing social job resources, increasing challenging job demands. In the *increasing structural job resources* dimension, employees may strive to enhance the structural resources such as demanding variety in their resources, more autonomy, responsibility improving job know-how from their employers to attain self development and seeking more opportunity for their growth and advancement in order to improve the performance both at the employee or organizational levels. In the *decreasing hindering job demands* dimension employees may reduce the number of tasks by doing away with some of the tasks they feel both physically and psychologically uncomfortable with or they may consciously avoid engagements that make their overall job overwhelming. In the *increasing social job resources*, employees may seek guidance, opinions, ask for feedback from superiors, subordinates, or colleagues in order to improve their performance. In the *increasing challenging job demands* dimension, employees may attempt to broaden the

scope of their job or mix and remix the tasks of the job to make it more challenging in order to maintain interest and avoid boredom in one's job.

In the development of research on Positive Organizational Behaviour (POB), there is a new concept formulated by Luthans et al. (2004), named positive psychological capital. Psychological capital can be defined as a positive state of a person that characterized by: self efficacy to try or do a challenging task, optimism about the success in the present and the future, perseverance in achieving goals and having a hope and resilient in the face of problems and continue to strive to achieve success (Luthans, Youssef, & Avolio, 2007). Psychological capital has four dimensions, namely self efficacy, optimism, hope, and resiliency.

The first dimension is self efficacy, based on Bandura (1986, 1997) theory self efficacy can be defined as a person's belief in the ability that can encourage to be motivated and as an individual's way of acting in order to be successful in doing certain jobs (Stajkovic & Luthans, 1998; Luthans, et al., 2007). The second dimension is Hope. Hope is a state of positive psychology that is based on mutual awareness between agencies or the power to achieve goals and path ways or planning in achieving goals. Snyder (1991) conducted a study that revealed that hope is a cognitive condition in which individuals are able to set and achieve a goal and target through means of self directed, energy, and perceptions of self-control (Luthans, et al., 2007). The third dimension is Optimism. Optimism is defined as a model of thinking in which individuals attribute positive events into themselves, are permanent, and the cause is pervasive, and is a factor caused by certain situations. Individuals who are optimistic will feel involved in positive events that occur in a long time, seeing that the causes of positive or pleasant events are in the power and self-control of individuals (Seligman, 1998; Luthans, et al., 2007). The fourth dimension is resiliency which is defined as a collection of phenomena characterized by positive patterns of adaptation in a deteriorating context (Masten & Reed, 2002; Luthans, et al., 2007). In psychological capital, resiliency is not only seen as an ability to rise again from adversity, but it is also a very positive thing in facing an event that is challenging and is an ability to exceed the normal limits and balance points of the individual (Avolio & Luthans, 2006; Luthans, 2002; Youssef & Luthans, 2005b; Luthans, et al., 2007).

METHODS OF RESEARCH

The subjects in this study were Generation Y employees aged 20 to 36 years. Sampling in this study was non-probability techniques with accidental sampling method. The use of this sampling technique allows samples to be taken randomly, so the bias can occur. The number of samples in this study was 82 people with a percentage of 40% men, as many as 33 people and 59.8% women, as many as 49 people. Subjects on average are 25 years old who come from various types of companies such as government agencies, state-owned enterprises, private sector, and independent businesses.

The scale used in this study is the adaptation and trial of three scales that measure Psychological Capital, Job Crafting, and Work Engagement variables. To measure psychological capital variables, the scale used is the PsyCap Questioner (PCQ) with a reliability of 0.922, this scale contains 24 items and was developed by Luthans et al. In 2007. Work engagement variables were measured by the Utrecht Work Engagement Scale (UWES) scale which had gone through a trial process and had reliability of 0.848 and consisted of 15 items. While for job crafting variables measured by Job Crafting Scale (JCS) which has also been on a trial process, this scale has 18 items and the reliability value is 0.775 (Andini, 2016).

CONCEPTUAL FRAMEWORK

Based on an empirical study, it was assumed that the effect of psychological capital on engagement with the job crafting as a mediator variable on generation Y employees. The conceptual framework presented in Figure 1.

Based on the conceptual framework above, the proposed research hypothesis is:

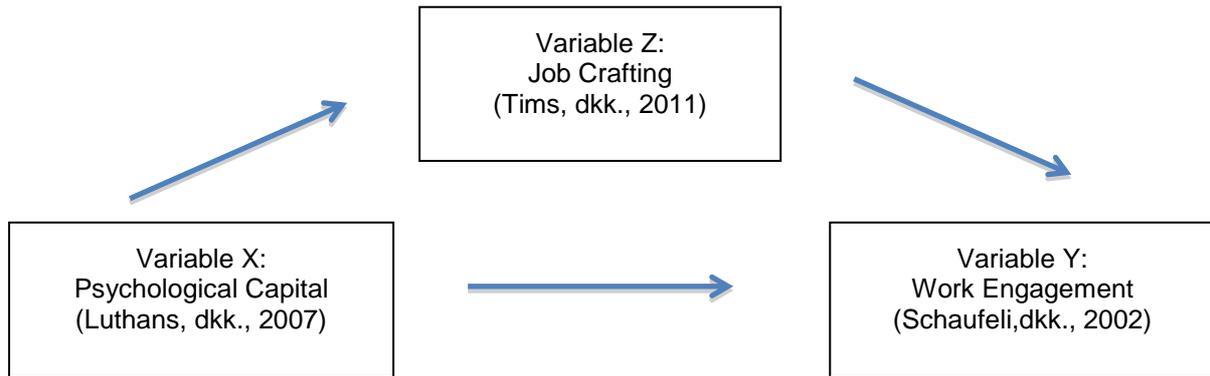


Figure 1 – Conceptual Framework

Ha: There is effect of Psychological Capital on Work Engagement with Job Crafting as a mediator variable for Y generation employees;

Ho: There is no effect of Psychological Capital on Work Engagement with Job Crafting as a mediator variable for Y generation employees.

RESULTS OF STUDY

In this study, data analysis was performed using Baron and Kenny (1986) mediation test which stated that the procedure for analyzing mediator variables in a simple way can be done through a regression test. Before the regression test was carried out, the researcher conducted a correlation test on the three variables in this study. After that, researcher conducted a simple linear regression test and continued with multiple linear regression tests.

Table 1 – Correlation Statistics Results

n/n	Variable	1	2	3
1	Psychological Capital	1	0,668	0,682
2	Job Crafting	0,668	1	0,556
3	Work Engagement	0,682	0,556	1

From the results of the correlation test above, the strength of the relationship between all variables is classified as moderate, where the relationship between the Psychological Capital variable and Job Crafting is 0.668; psychological capital with work engagement is 0.682; and the job crafting variable with work engagement is 0.556. In this study, the three correlation results are significant because the significance value is less than 0.05 at the 5% significance level. It is seen that the direction of the relationship of all variables is positive. Thus, when the work engagement variable increases, the psychological capital and job crafting variables will also increase. Similar to psychological capital, when job crafting variables increase, psychological capital and work engagement variables will also increase.

Table 2 – Results of Regression Analysis

No	Regression Model	R Square	B Value	Beta	Significance	Description
1.	Regression X to Y	0,465	0,009	0,682	0,000	Significant
2.	Regression X to Z	0,447	0,359	0,668	0,000	Significant
3.	Regression X and Z to Y	0,483	0,007 (X) 0,004 (Z)	0,561 0,181	0,000 0,100	Significant Not Significant

Baron and Kenny (1986) state that the effect of independent variable on dependent variable with the role of the mediator variable will be fulfilled if there are three conditions, such as: 1) estimating the estimated predictor value of the dependent variable regression (Y) with an independent variable (X) as a predictor, this is expected that the resulting value is

significant; 2) 2) estimate the estimated predictor value of the mediator variable regression (Z) with an independent variable (X) as a predictor. At this stage it is expected that the resulting value is also significant; 3) Regress the dependent variable (Y) with the independent variable (X) and the mediator variable (Z) as predictors. At this stage, the Z prediction of Y is expected to have a significant value.

From the table above, it can be seen that the results of the regression analysis are fulfilled in the first and second conditions with estimated predictors of 0.009 and 0.359 and the results obtained are significant. In the third condition, the mediator variable is proven to affect the dependent variable with the control of the independent variable. This is indicated by the insignificant results in the multiple regression model x with y with a significance level of 0,000 with an estimated predictor value of 0.007 and z multiple regression to y with a significance level of 0.100 with an estimated predictor value of 0.004. The estimated value of the predictor x against y in the third equation of 0.009 is proven to be greater than the first equation. Therefore, the research hypothesis which states that there is a psychological capital effect on work engagement with job crafting as a mediator variable for Y generation employees is accepted and included in the type of perfect mediation.

DISCUSSION OF RESULTS

The purpose of this study was to determine the effect of psychological capital on work engagement through the role of job crafting in generation Y employees. Based on the results of the regression analysis obtained in this study, it is known that job crafting can mediate the effect of psychological capital on work engagement. This is evidenced by the four requirements in the mediation test Baron and Kenny (1986) fulfilled.

The results of the analysis in the first equation state that psychological capital has an effect on work engagement can be categorized at a moderate level. This is in line with the research that conducted by Yassinia (2016) which states that psychological capital can affect work engagement by 55.3%. In this study it was proven that psychological capital variables contribute to increasing one's work engagement. The results of previous studies conducted by Simons and Buitendach (2013) also state that employees who have psychological beliefs, expectations, and assessments of their work (eg. hope, optimism, resilience, and self-efficacy) can be seen as potential sources of positive emotions and attitudes and employee behaviour such as work engagement.

The results obtained in the second equation prove that psychological capital has an effect on job crafting. The previous research conducted by Cenciotti, et al. (2017) stated that psychological capital is a significant predictor of job crafting over time. On that research, psychological capital conceptualized as an aggregate of psychological resources similar to the COR (Conservation of Resource) concept. According to Hobfoll (1989, 1998), resources tend to appear and evolve in associate ways. Halbesleben, et al (2014; Hobfoll, 1988; Cenciotti, et al., 2017) stated that people with more resources are more likely to invest them in concrete actions to acquire new resources and achieve their goals than individuals with less resources. In accordance with these theoretical assumptions, their model revealed that an individual's initial level of personal resources (i.e., PsyCap) predicted their tendency to invest them in enacting proactive behaviours finalized at shaping their work environment (i.e., job crafting) (Cenciotti, et al., 2017).

In the third equation, it proves that the effect of psychological capital on work engagement will be slightly stronger if mediated by job crafting. Individuals with high psychological capital will tend to be more active in changing their work environment, for example undertaking new projects consistent with their beliefs of efficacy (Tims & Bakker, 2010). Tims and Bakker also stated that the more successful employees are in using concrete behaviours to create better work conditions and develop their competencies. Vogt et al (2016; Cenciotti, et al., 2017) said that there is a positive and reciprocal longitudinal prediction of PsyCap by job crafting. This link suggests that the relation between resources (i.e., PsyCap) and investments (i.e., job crafting behaviours) is dynamic. Job crafting will increase psychological capital because employees can create positive working conditions in

terms of learning opportunities, social support and challenging activities. Thus, generation Y employees will feel more engaged to their work if they have a positive psychological state and are strengthened by their initiative in making changes related to job resources and demands in their work environment.

CONCLUSION AND RECOMMENDATIONS

Based on a series of analyzes conducted by researcher, it can be concluded that job crafting can mediate the effect of psychological capital on work engagement among generation Y employees. Individuals who have a positive psychological state and initiative in making changes in their work environment will feel more engaged to their work. Thus, the alternative hypothesis (Ha) in this study was accepted. In line with this, the results of research on Generation Y employees show a positive correlation between work engagement and psychological capital and job crafting.

From the results of this study, the authors propose several suggestions including: 1) the next researcher can conduct research related to other variables relating to generation Y employees such as supervisory support, job enlargement, perceived organizational support and job enrichment; 2) related to the method, researchers can consider using external sources for data concerning psychological variables: for example, an employee's job crafting could be measured by asking supervisors for frequencies regarding their subordinates crafting behaviours; 3) researchers can measure psychological capital, job crafting, and work engagement from a multidimensional perspective.

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FACTORS AFFECTING PROFITABILITY OF PHARMACEUTICAL COMPANIES LISTED IN INDONESIA STOCK EXCHANGE

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ABSTRACT

Profitability is one of the factors to assess the good and bad of a company's performance. This study aims to analyze empirically the effect of Debt Ratio, Debt to Equity Ratio, and Total Asset Turnover on Return On Asset. The research sample was selected using a purposive sampling method, namely the selection of samples of company shares/stocks during the study period based on certain criteria. Pharmaceutical sub-sector companies those actively present financial reports during the study period in 2012-2016 on the Indonesia Stock Exchange. The data used shows in full that comes from the balance sheet and income statement. The results of the research findings show that there is no effect of Debt Ratio, Debt to Equity Ratio, and Total Asset Turnover on Return on Asset.

KEY WORDS

Debt Ratio, debt to equity ratio, total asset turnover, return on asset.

Every company wants their business to run smoothly and can even develop. To achieve this, certainly costs needed. Capital is a very important thing for a company, because capital is used to finance operations and also develops business. Capital could come from own capital or loan capital or debt. Therefore, determining an optimal capital structure is also important, especially for go public companies in the capital market (Black & Gilson, 1988; Alti, 2006; Ang et al., 2018; Allen et al., 2018; Roychowdhury & Srinivasan, 2019).

The pharmaceutical sector is one of the industries supporting economic development in Indonesia. Progress in this sector not only provides input to the Country but also encourages the development of other related industries. Companies or organizations carry out various activities to achieve the goals that have been previously set. In an effort to achieve that goal, the company must be able to operate smoothly and be able to combine all available resources so that it can achieve optimal results and profit levels. The survival of a company is influenced by many things, including the profitability of the company itself. Profitability is one of the factors to assess the good and bad of a company's performance. *Return on Assets (ROA)* is a profitability ratio used to measure the effectiveness of a company in generating profits by utilizing the total assets it has. The factors that can affect the profitability of a company among others, *Debt Ratio (DR)*, *Debt To Equity Ratio (DER)* and *Total Asset Turnover (TATO)*, Sales Growth and Company Size.

According to Kasmir (2014), Yuniningsih et al. (2018), Wibowo et al. (2019) profitability ratios are ratios used to assess a company's profits in seeking a profit. This ratio provides a measure of the level of management effectiveness of a company as indicated by profits generated from sales and income (Nezami et al., 2018; Kajanathan & Velnampy, 2018; Saerang et al., 2018) According to Tandelilin (2010) one of the important indicators for assessing company prospects in the future is to see how far the company's profitability grows, so that this ratio is a factor that gets important attention for investors in assessing a company.

In addition, the rate of sales growth can also affect the company's profitability. The higher net sales made by the company can encourage the higher gross profit that can be obtained, so that it can encourage the higher company's profitability. This is in line with the size of a company. With the increasing size of the company, it will reflect the increasing amount of available resources to meet product demand. Besides that, with the increasing

size of a company, the company has the opportunity to reach a wider market to market its products, thus opening up opportunities for higher profits.

According to Kasmir (2014), Rouf (2015), Nassar (2016), Debt Ratio (DR) is a debt ratio used to measure the ratio between total debt and total assets. In other words, how much the company's assets are financed by debt or how much the company's debt affects the management of assets. From the measurement results, if the ratio is high, it means that funding with debt is increasing, then it is increasingly difficult for companies to obtain additional loans because it is feared that the company is unable to cover its debts with its assets, so if the ratio is low, the smaller the company is financed with debt.

According to Prastomo (2002: 84) in Willana (2012), "DR can also provide an overview of the capital structure owned by the company, so that it can be seen the level of risk of collectible debt," Kasmir (2014) explains that "the results of this ratio will give different meanings to creditors and companies. For banks (creditors), the greater the ratio, the more unprofitable, because the greater the risk borne for failures that may occur in the company". Then it can be concluded that the DR is a ratio used to measure a company's ability to finance short-term and long-term debt.

Similarly, the *Debt to Equity Ratio* is the ratio of debt to company equity or conditions that indicate the company's ability to fulfill its operational activities using its own capital. That is, the more capital used to fulfill the company's operational activities will reduce the likelihood of a loan, so that it can minimize liabilities in paying interest expenses for the company. According to Gibson (2008) namely "*Debt equity ratio is another computation that's determines the entity's long-term debt-paying ability*". Meaning that, *debt equity ratio* is another computation that determines the ability to pay for an entity's long-term debt. According to Sugiyono (2009: 71), states that: This ratio shows the ratio of debt and capital. This ratio is one of the important ratios because it correlates with the problem of *trading on equity*, which can give a positive and negative influence on the profitability of own capital and the company. Bhandari (1988) mendefinisikan *debt to equity ratio*, "Measures used in analyzing financial statements to show the amount of collateral available to creditors"

Total Asset Turnover is an activity ratio used to measure how much the effectiveness of the company in using resources in the form of assets. The more efficient the asset user is and the faster the refund is in the form of cash (Abdullah Halim, 2007). Whereas according to (Weston and Brigham, 1989), TATO is the ratio of the last asset manager, measuring the turnover or utilization of all company assets. If the company does not produce enough business volume for the size of the investment in the amount of its total assets, sales must be increased, some assets must be sold or a combination of these steps must be done immediately.

According to Agnes Sawir, (2003: 19) is "the Total Assets Turnover speed in a certain period". Definition of Total Asset Turnover according to Mandu Hanafi (2003: 81) is "This ratio measures how far a company's ability to generate sales is based on the effective use of total assets. Whereas according to Syamsudin (2009: 19) "Total Asset Turnover is a ratio that shows the level of efficiency of the overall use of company assets in generating certain sales volumes. From the above meanings, it can be concluded that Total Asset Turnover is a company's asset turnover due to sales in a certain period.

Table 1 – Debt Ratio, Debt to Equity Ratio, Total Asset Turnover, and Return on Asset in Pharmacy companies listed in the Indonesia Stock Exchange/bursa efek Indonesia (BEI), 2012-20116

No	Variable	Year					Average
		2012	2013	2014	2015	2016	
1	DR	418.42	390.40	407.26	383.84	344.72	388.92
2	DER	245.69	284.56	275.79	272.37	294.55	274.59
3	TATO	844.47	794.46	741.17	770.87	738.16	777.82
4	ROA	68.91	107.58	82.10	52.72	84.72	72.200

Source: www.idx.co.id (data processed).

Based on Table 1, it can be concluded that the debt ratio, total asset turnover has decreased and increased every year while the Debt to Equity ratio has increased every year except in 2014 debt to equity has decreased. In 2013-2014 ROA increased from the previous year and decreased in 2015 and increased again in 2016. *The Debt ratio declined in 2013 and increased again in 2014 while in 2015-2016 it experienced a decline from the previous year, as well as the total asset turnover in 2013-2016 which declined from the previous year and increased in 2015 and declined again in 2016.* This shows a difference that if associated with the existing theory, where in theory it is said that increasing ROA will be in line with the increase in DR, DER, and TATO. Things like this can be seen as a comparison between theories and facts that occur in reality in this study.

Based on the background of the problems described above, it can be concluded that theoretically the debt ratio, debt to equity ratio and total asset turnover are three factors that influence profitability, but in reality there may be other factors that more dominate their influence on profitability and to prove the truth of these three factors can affect profitability of pharmaceutical companies, further research is needed on pharmaceutical companies listed on the Indonesia Stock Exchange.

METHODS OF RESEARCH

This type of research is quantitative research namely research that emphasizes on the testing of theories through measuring research variables with numbers and analyzing the data with statistical procedures. The research sample was selected using a purposive sampling method, namely the selection of samples of company shares/stocks during the study period. Pharmaceutical sub-sector companies actively present financial statements during the study period in 2012-2016 in the Indonesia Stock Exchange (website www.idx.co.id) which is the official website of Indonesia Stock Exchange/Bursa Efek Indonesia (BEI). Data analysis in this study using multiple linear regressions, to determine how much the influence of the independent variable namely: DR (X_1), DER (X_2), TATO (X_3) on the dependent variable ROA (Y).

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + e$$

Where: Y = Dependent variable (Return on Asset); a = Constant; b_1 , b_2 , b_3 = Regression Coefficient; X_1 = Debt Ratio; X_2 = Debt to Equity Ratio; X_3 = Total Asset Turnover; e = Error / Disturbing element.

RESULTS AND DISCUSSION

To test the feasibility of the regression model used, it must first meet the classic assumption test. There are four important assumptions underlying the classical linear regression model, namely, the variables have a normal distribution, conditional variance is constant or homoschedastic, no autocorrelation, and there is no multicollinearity among the variables that explain.

Normality test is done to test whether the sample taken comes from a population that is normally distributed or not. To see whether the data is distributed normally or not, we can look at the *PP Plot* graph. A data will be normally distributed if the value of observation probability. In the *PP Plot* graph, the similarity is aimed at the line of expectation and probability of observation (Santoso and Ashari, 2015:232).

Based on Figure 1 above shows that all existing data are normally distributed, because all data spreads form a diagonal straight line, then the data meets normal assumptions or follows a normality line.

The Heteroscedasticity test aims to test whether the data in the regression model occurred inequality variance from the residuals of one observation to another observation. If the residual variance from one observation to another observation remains, then it is called homoskedasticity if different is called heteroscedasticity.

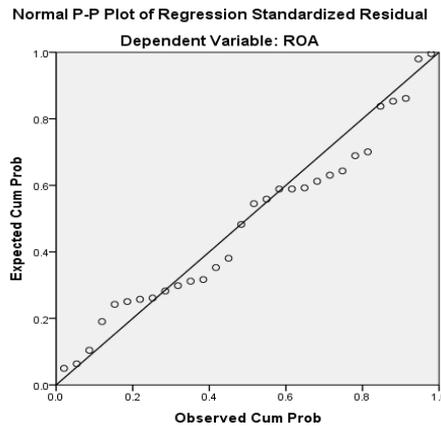


Figure 1 – Normality Test Results (Source: research results; data processed in SPSS)

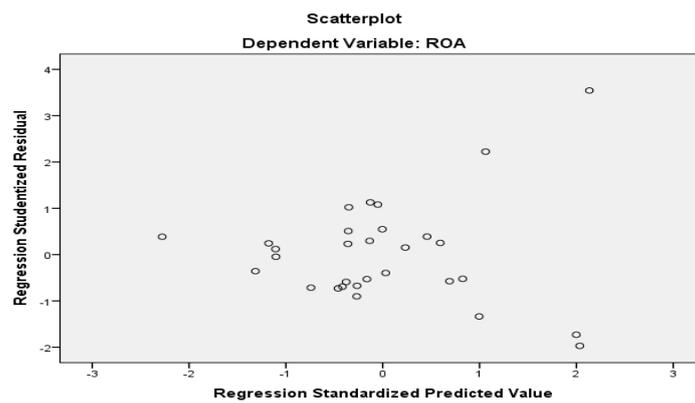


Figure 2 – Heteroscedasticity Test Results

Based on Figure 2 above, it can be seen that the distribution of data is not certain and does not form a specific pattern, and spreads above and below the number 0 on the Y axis, so it can be concluded that the regression model does not have a heteroscedasticity problem.

Multicollinearity test aims to test whether the regression model has a correlation among the independent variables. A good regression model should not have a correlation among the independent variables. Detection of multicollinearity by looking at tolerance and or VIF. A low tolerance value is the same as a high VIF value ($VIF = 1 / \text{tolerance}$) and indicates the existence of collinearity. The commonly used value is the tolerance value of 0,10 or the same as the VIF value above 10. The level of collinearity that can be tolerated is the tolerance value of 0,10 is equal to the level of multicollinearity of 0,95.

Table 2 – Multicollinearity Test Results

Coefficients^a

Model	Collinearity Statistics	
	Tolerance	VIF
1 DR	.425	2.354
DER	.436	2.294
TATO	.937	1.068

a. Dependent Variable: roa
Source: research results (Data processed in SPSS).

From the data in Table 2 above, it can be seen that the requirements to pass the multicollinearity test have been fulfilled by all available independent variables, namely tolerance values of not less than 0,10 and VIF (Variance Inflation factor) values of more than

10. Therefore, it can be concluded that all the independent variables used in this study do not correlate between the independent variables one with the other independent variables.

Autocorrelation test is done to test whether in a linear regression model there is a correlation between error terms in a period with errors in the previous period which usually occur because of using time series data. A good regression model is a regression that is free from autocorrelation (Imam Ghazali, 2006).

One of the ways to detect the presence or absence of autocorrelation is by testing of the Durbin Watson test value (DW-Test). The Durbin Watson test is only used for *first order autocorrelation* and requires an intercept (Constanta) in the regression model and no variable lag among the independent variables.

Table 3 – Autorrelation Test Results

Model Summary^p

Model	Durbin-Watson
1	2.338 ^a

a. Predictors: (Constant), TATO, DER, DR.

b. Dependent Variable: ROA.

Source: research results (Data processed in SPSS).

Based on Table 3, the value of Durbin Watson in this study amounted to 2.338. Based on the criteria that have been determined DW values are between -2 to 2, then it can be concluded that there is autocorrelation in this test.

Multiple regression model is a regression analysis technique to test the relationship between the dependent variable with several independent variables using a multiple regression analysis model. Regression analysis is a tool to measure how the influence of the independent variable on the dependent variable, in the study the purpose of regression analysis is to predict the magnitude of the dependent variable by using data from independent variables whose magnitude is known.

Table 4 – Results of Multiple Regression Calculation

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	31.126	21.204		1.468	.154
1 DR	-.343	.212	-.460	-1.614	.119
DER	-.179	.175	-.287	-1.021	.317
TATO	.091	.094	.185	.964	.344

a. Dependent Variable: ROA.

Source: research results (Data processed in SPSS).

Based on Table 4 above, obtained multiple linear regression equation as follows:

$$Y=31,126 -0,343X1-0,179X2+0,091X3+e$$

To see how much the partial influence of the three independent variables (Debt Ratio, Debt to Equity Ratio and Total Asset Turnover) that affect Profitability in Pharmaceutical Companies. In relation to the description above, then can be presented interpretation as follows:

Constant value is equal to 31,126 stating or means that if there is no addition of independent variables namely Debt Ratio, Debt to Equity Ratio and Turnover Total Asset then Profitability in Pharmaceutical Companies listed on the Indonesia Stock Exchange in 2012-2016 is positive amounted to 31,126.

The debt ratio (DR) regression coefficient equal to -0,343, meaning that every increase in DR of 1% and other variables is considered constant, then it will reduce ROA by -34,3%.

The debt to equity ratio regression coefficient equal to -0,179, means that every increase in DER of 1% and other variables are considered constant, then reducing the ROA by -17,9%.

The regression coefficient of total asset turnover (TATO) equal to 0,91, meaning that every increase in TATO of 1% and other variables is considered constant, then it will increase ROA by 9,1%.

From the above results indicate that these three variables have a strong influence on the return on assets. This can be seen in the following table:

Table 5 – Determination coefficient test

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.323 ^a	.104	.001	12.28800	2.338

a. Predictors: (Constant), tat, der, dr

b. Dependent Variable: roa

Table 5, above it is known that the value of the Determination Coefficient (R^2) is equal to 0,104 or 10,4%. So it can be concluded that the variables of Debt Ratio, Debt To Equity Ratio and Total Asset Turnover as independent variables have an influence of 10,4%. While the remaining 89,6% (100% -10.4%) were obtained from other variables that not examined in this study.

DISCUSSION OF RESULTS

Based on the results of research related to the title, problems and hypotheses based on the results of data processing, the writer will discuss the results of the research according to the problems proposed.

The results of statistical test with partial test (t test) obtained a coefficient regression value of -0,334 with a significance value of 0,119, because the significance value is greater than α 0,05, this means that H1 is rejected because the Debt Ratio has negative insignificant effect on return on assets in Pharmaceutical companies listed on the Indonesia Stock Exchange.

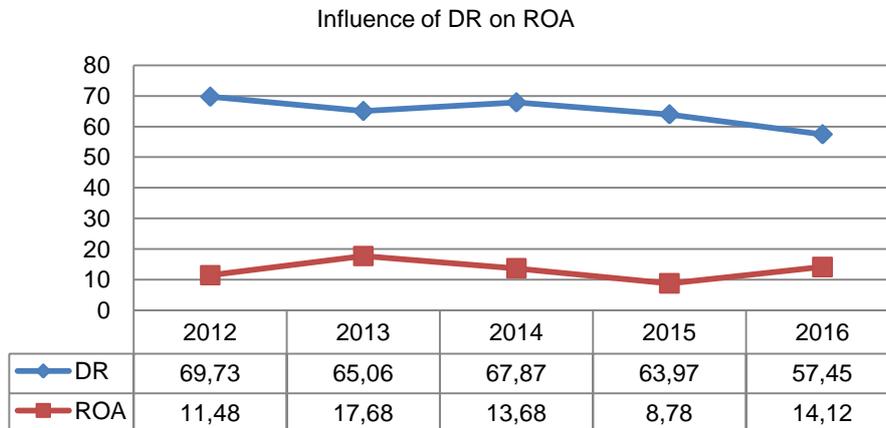


Figure 3 – Graph of Debt Ratio (Source: www.idx.co.id, data processed)

In the graph above it can be seen that the Debt Ratio variable during the study period from 2012 to 2016 experienced a very significant decline, only 2014 experienced a slight increase from the previous year. This also affects Return on Asset, which can be seen that in 2013 increased and in 2014 decreased and in 2015 the ROA experienced a very drastic decline. The results of the regression analysis show that the DR is one of the factors that

have insignificant effect on ROA in pharmaceutical companies listed on the Indonesia stock exchange. The results of this study were supported by previous researchers namely Nusraningrum (2018). Debt Ratio on ROA the result obtained is DR does not have a significant effect on ROA. The DR research shows how the ability of the company to fulfill its obligations in paying its debt.

The results of statistical testing with partial test (t test) obtained a value of regression coefficient equal to -0,179 with a significance value of 0,317 greater than α 0,05. This means that H2 is rejected because the debt to equity ratio has a negative and insignificant effect on return on assets. This is contrary to the temporary hypothesis that H2 has a negative and significant effect on return on assets in Pharmaceutical companies listed on the Indonesia Stock Exchange. This can be seen in the graph below:

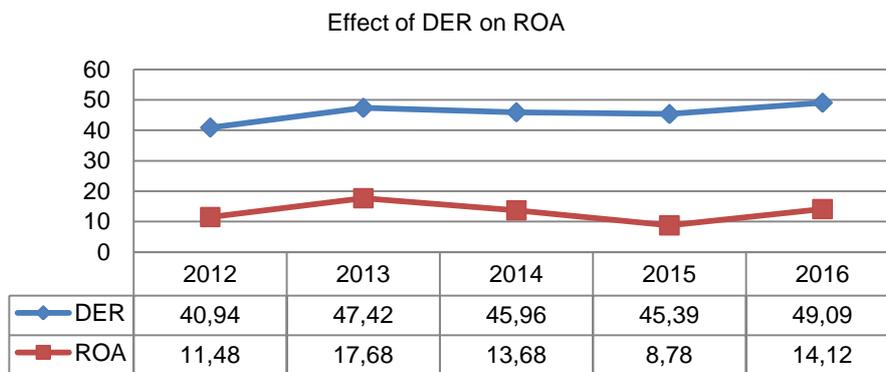


Figure 4 – Graph of Debt to Equity Ratio (Source: www.idx.co.id, data processed)

In the graph above, it can be seen that the variable Debt to Equity Ratio experienced an ups and downs where in 2014 there was an increase, while in 2014-2015 the DER experienced a slight decline, but in 2019 DER increased again. This tends to have no effect on Return on Assets.

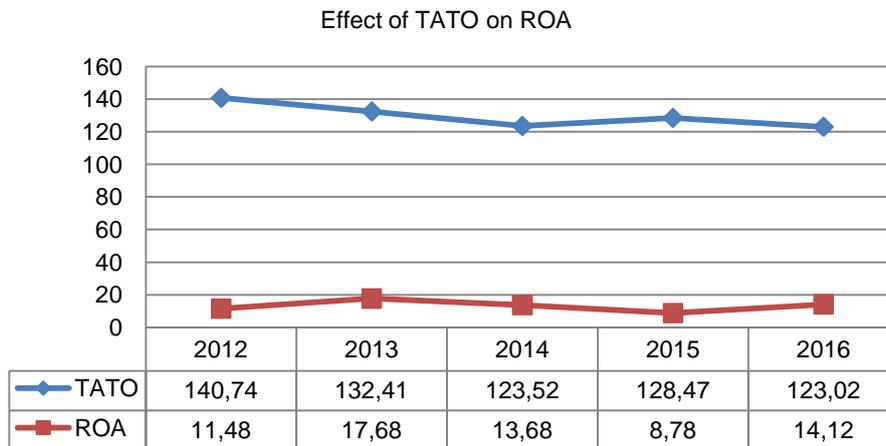


Figure 5 – Graph of Total Asset Turnover (Source: www.idx.co.id, data processed)

The results of this study are supported by previous research conducted by Vätavu (2015), influence of capital structure (*Debt to Equity Ratio*) on Profitability (*ROA*), comparative study on textile and garment industry companies listed on the IDX, descriptive analysis method, classic assumption test and hypothesis test. The results obtained namely partially DER has negative insignificant effect on ROA. The DER study shows how the level of a company’s ability to fulfill its obligations in paying its debt because DER is one indicator to attract new investors, but is not fully becomes an indicator for investors.

The results of statistical testing of partial test (t test) obtained a value of regression coefficient equal to 0,091 with a significance value of 0,344 greater than α 0,05. This means that H3 is accepted because the Total Asset Turnover has a positive and insignificant effect on return on assets. This is in contrast to the temporary hypothesis that H3 has a negative and significant effect on return on assets in Pharmaceutical companies listed on the Indonesia Stock Exchange.

In the graph above, it can be seen that the variable of Total Asset Turnover in 2013 - 2016 has decreased; only in 2015 the TATO experienced a slight increase from the previous year. This also affects the return on assets, and prospective new investors. The results of this study are in line with the research conducted by Jatismara (2011) TATO on ROA results obtained namely TATO has a positive but insignificant effect. So that it can be said that TATO has an effect on ROA.

CONCLUSION AND RECOMMENDATIONS

From the results of the analysis and discussion of the factors that affect profitability in pharmaceutical companies listed on the Indonesian stock exchange, conclusions can be drawn from this research, as follows:

The results of statistical test with partial test (t test) obtained a coefficient regression value of -0,334 with a significance value of 0,119, because the significance value is greater than 0,05, this shows that the variable of Debt Ratio does not affect Return On Assets. This shows that the DR is one of the factors that do not affect ROA in pharmaceutical companies listed on the Indonesian stock exchange.

The results of statistical test with partial test (t test) obtained a coefficient regression value of -0,179 with a significance value of 0,317, because the significance value is greater than 0.05, this shows that the Debt to Equity Ratio variable does not affect Return on Assets.

The results of statistical test with partial test (t test) obtained a coefficient regression value of 0,091 with a significance value of 0,344. Because the significance value is greater than 0.05, this shows that the Total Asset Turnover variable does not affect Return on Assets.

RECOMMENDATIONS

For companies, the management should need to improve financial performance and overall performance of the company's management every year, in order to increase investor confidence in investing in the company. To improve company performance can be done by managing existing capital for activities that can increase added value for companies and investors that are more effective and efficient.

For investors, it is better to pay attention to internal factors, namely DR, DER and TATO that applied to become risk consideration which might occur and the benefits to be obtained before making a decision to invest in a company, especially pharmaceutical companies listed on the Indonesian stock exchange.

For further researchers, this researcher only uses three independent variables, namely DR, DER and TATO in influencing ROA in pharmaceutical companies listed in the Indonesia Stock Exchange.

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**COMPARISON OF DENSIFIED SENGON AND MAHANG BOARDS AT 43%
DENSIFICATION TARGET, 150°C TEMPERATURE,
AND 6.0 MINUTE PRESSING TIME**

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ABSTRACT

This research used sengon and mahang wood. Sengon was taken as a representative of plantations and Mahang was taken as representative of natural forests. Sengon and Mahang possess low density, therefore it requires strength improvement. One of the methods used is densification. The study used the parameters of the previous research which were considered optimal. This research used 3.5 cm initial thickness, 6 minutes densification time, 150°C temperature, and initial treatment by boiling for 45 minutes. Research result exhibited an increased density in sengon and mahang's radial and tangential plane with a percentage of 50%. The Dunnet test results on radial plane parallel press and perpendicular press, as well as on tangential plane parallel press and perpendicular press, exhibited a significant hardness increase compared to the control board. Furthermore, the compressive strength parallel to sengon and mahang densified board fiber is higher compared to control board fiber. Sengon board displayed an increase of 73.75% on the radial board plane and 97.58% on the tangential board plane. Mahang board displayed a lower increase of 39.05% on the radial board plane and 43.00% on the tangential board plane.

KEY WORDS

Densification, density, hardness, compressive strength parallel, fiber.

The diminishing supply of commercial wood species as building materials and furniture encouraged the community to replace it with other types of wood, especially woods possessing low density. However, these type of wood is limited in number and yield. Therefore, it is necessary to find a solution that can overcome the problem of scarcity of wood, for example by increasing the density of certain types of wood. Increasing the wood density could be conducted by filling wood cells with fillers and pressing method. This research aimed to increase Sengon and Mahang wood density, considering that both types are fast growing. Sengon was taken as a representative of plantations and Mahang was taken as a representative of natural forests. Fast-growing wood is an alternative to replace the function of the wide-leaf plant as flooring, interior, molding, and furniture (Inoue, 1996) and for structural construction wood applications (Tomme et al, 1998). Solid wood densification was first carried out in Germany in the early 1930s under the name Lignostone (Kollmann et al, 1975). In the United States, wood densification products are known as Staypak (US Forest Products Laboratory, 1999), which are in the form of wood products densification with heat treatment. USDA (1999) in Wardhani (2005) explained that densification enhances wood strength properties such as flexural (MOE, MOR and stress at proportional limits), compressive strength, tensile strength, shear strength, density and hardness at an average greater than 150%. According to Lida and Norimoto, 1987, the quality of densification such as dimensional stability, uniformity, increased strength and smoothness of the surface is only temporary. The influence of temperature and moisture content of the densified wood will recover close to its original form. Therefore technology is needed to maintain permanent densification results.

METHODS OF RESEARCH

The wood mechanical properties assessment used Universal Testing Machine (UTM). The physical properties test used oven and weighing method. The results were calculated using water content and density formula.

Wood Sample Preparation Research Procedure. The sengon tree used was about 80 cm in diameter. Mahang tree used was 40 cm in diameter. The sample was taken in a straight section in the middle of the trunk. Afterward, 4 cm thick and 2-meter length board were produced. The wood sample used required the radial and tangential plane. The sample board was left in the open air for three months duration. The sample board was cut into a 40 m x 40 cm x 2.0 cm control board, and one 40 cm x 40 cm x 3.5 cm board. Before the process of densification, the boards were air-dried to reach a moisture content of 12-18% for approximately 6 weeks.

Densification Process. The sample board was boiled for 45 minutes at a temperature of 100 °C (wood inserted after boiling water). After the boiling process, the board was directly wrapped with aluminum foil and put into the press machine. Pressing was conducted after the temperature reaches 150 °C. The pressing was conducted for 6 minutes, i.e. after the wood reached a thickness of 2 cm, the press machine was left for 6 minutes. Afterward, the press machine was turned off and opened after 24 hours. After the densification process, the board is air-dried for approximately 6 weeks until the water content reaches 12-18%.

Test Sample Production Process. Wood samples from the densification process were made into the physical and mechanical properties test sample. The test sample was produced according to a predetermined size. The physical properties measured were density. The mechanical properties assessed were wood hardness and compressive strength parallel to fiber. The sample size for assessing physical properties referred to the standard JIS Z 2102 (1957) and JIS Z 2103 (1957). The sample size for assessing mechanical properties referred to the standard JIS Z 2113 (1963).

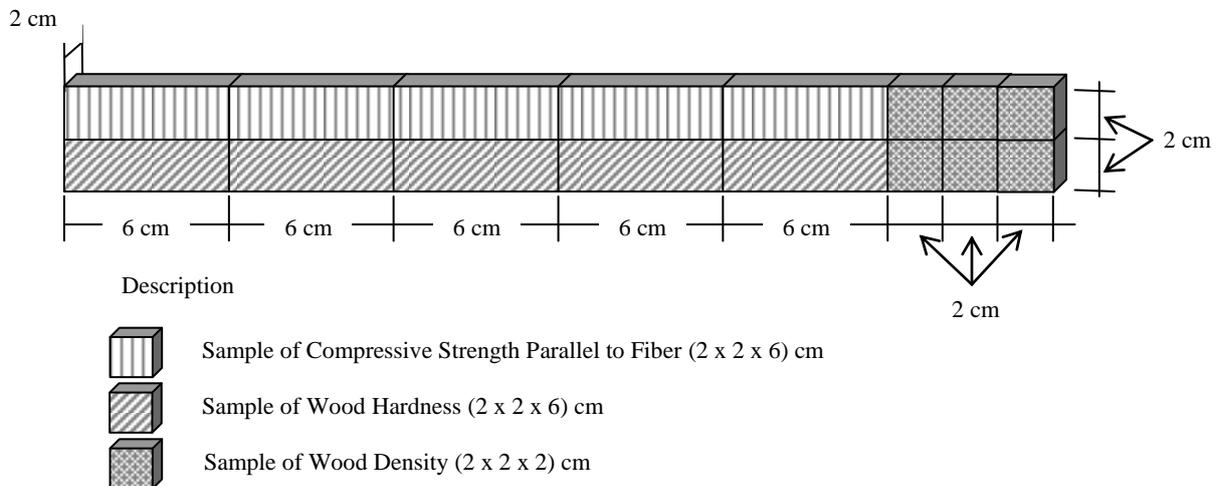


Figure 1 – Sample Respective Position on Densified Board

Data Analysis. The hardness analysis used a completely randomized design, utilizing factorial experiments with 2 treatment factors, namely factor A wood position (radial and tangential plane), and factor B compression position (parallel to the press and perpendicular to the press). Five repetitions were made on each sample.

RESULTS AND DISCUSSION

Dry air density and dry kiln density in the radial and tangential plane were recorded to determine density difference.

Table 1 – Shrinkage comparison on densified board and control board

Wood type	Wood Position	Dry air density (gr/cm ³)	Dry kiln density (gr/cm ³)	Shrinkage (%)
Sengon	Radial	0.6245	0.6070	2.81
	Tangential	0.5926	0.5815	1.87
	Control	0.4008	0.3732	6.88
Mahang	Radial	0.4650	0.4582	1.47
	Tangential	0.4625	0.4560	1.41
	Control	0.3056	0.2613	14.50

The dry air density in the sengon wood radial plane is 0.6245 gr / cm³. After kiln drying process, it reduced to 0.6070 gr / cm³ or shrinks by 2.81%. Sengon tangential planedry air density value is 0.5926 gr / cm³. After kiln drying process, it reduced to 0.5815 gr / cm³ or shrinks by 1.87%. The dry air density value of the sengon control board was 0.4008 gr / cm³. After kiln drying process, it reduced to 0.3732 gr / cm³ or shrank by 6.88%. The dry air density of the mahang wood radial plane is 0.4650 gr / cm³. After kiln drying process, it reduced to 0.4582 gr / cm³ or shrinks by 1.47%. The tangential planedry air density value is 0.4625 gr / cm³. After kiln drying process, it reduced to 0.4560 gr / cm³ or shrinks by 1.41%. The dry air density value of mahang control board is 0.3056 gr / cm³. After kiln drying process, it reduced to 0.2613 gr / cm³ or shrinks by 14.50%. The sengon control board shrinks 3 times compared to the densified board. Mahang control board shrinks 9.5 times compared to each densified board. Therefore densification process is capable to reduce wood shrinkage, hence allowing overcoming dimensional stability thickness.

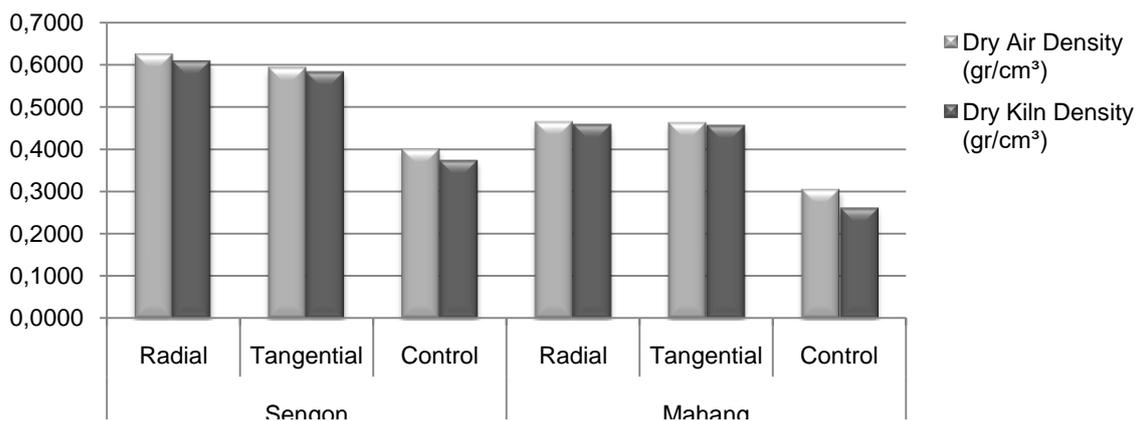


Figure 2 – Sengon and Mahang Density on Radial and Tangential Plane

Figure 2 exhibited the density difference between the radial and tangential plane. Densified sengon board density is 0.60 and densified mahang board density is 0.45. The control density is 0.40 and 0.30 on sengon and mahang respectively. The magnitude of the densified board density is strongly influenced by the control density or initial density.

Table 2 – Increased Sengon and Mahang Density Compared to Control Board

Wood type	Wood Position	Control Density (gr/cm ³)	Dry Air Density (gr/cm ³)	Dry Kiln Density (gr/cm ³)	Density Increase Compared to Control (%)	
					Dry Air	Dry Kiln
Sengon	Radial	0.4008	0.6245	0.6070	55.83	51.45
	Tangential	0.4008	0.5926	0.5815	47.87	45.10
Mahang	Radial	0.3056	0.4650	0.4582	52.15	49.92
	Tangential	0.3056	0.4625	0.4560	51.33	49.20

Table 2 exhibited both wood type dry air density and dry kiln density increased by 50% compared to control density. Therefore the densification process is capable to increase wood density. Dodi Nandika (2014) increased sengon density utilizing compregnation process up to 80 (70%). Sulistyono (2001) conducted a 50% target densification on agathis had succeeded in increasing its density. Agathis density increased by 74% on the tangential plane and 72% on the radial plane compared to control. Murhofiq's (2000) study exhibited

that agathis wood densification up to 50% of its original thickness was able to increase its density from 0.41 g/cm³ to 0.9 g/cm³. Sengon wood, with a density of 0.23 g/cm³ exhibited density increase to 0.48 g/cm³ after solidification.

Sengon and Mahang densified board density is 50% higher than the control. The density percentage would increase when the densification target is increased from 43% to 50%. This research reduced the initial thickness from 3.5 cm to 2 cm. Therefore, the densification target is around 43% due to potential damage to the board. A high percentage target would risk damage, especially the treatment in the form of pre-press heating by boiling in a temperature of 100 °C. Other research, however, used autoclave. Therefore allowing control over heat and pressure.

Sengon and Mahang Hardness. Based on the analysis of diversity on densified sengon board hardness, as presented in the following table 3, exhibited treatment or factor A (radial and tangential plane) have a significant influence on increasing densified board hardness. On the other hand, factor B (parallel and perpendicular pressure), as well as A and B factors interaction do not significantly influence densified board hardness. The analysis of diversity on densified mahang board hardness, as presented in table 4, exhibited there is no source of diversity values significantly different as all F count < F table. The following analysis used the dunnet test to ascertain whether there is a significant difference or not.

Table 3 – Anova on densified sengon board

Source of Diversity	JK	db	KT	F hit	F- table	
					5%	1%
P	66,141.40	3	22047.13	11.14	3,24	5,29
A	48,609.80	1	48609.80	24.57	4,49	8,53
B	16,017.80	1	16017.80	8.10	4,49	8,53
A*B	1,513.80	1	1513.80	0.77	4,49	8,53
G	31,654.80	16	1978.42			
Total	163,937.60	19				

Table 4 – Anova on densified mahang board

Source of Diversity	JK	db	KT	F hit	F- table	
					5%	1%
P	3,290.95	3	1096.98	0.99	2.21	3.04
A	432.45	1	432.45	0.39	3.26	5.25
B	2,856.05	1	2856.05	2.58	3.26	5.25
A*B	2.45	1	2.45	0.00	2.63	3.89
G	17,703.60	16	1106.48			
Total	24,285.50	19				

Table 5 – Sengon hardness increase compared to control

Board type	Test Position	Control	Hardness	Increase (%)
Radial	Parallel Press	122.00	325.00	166.39
	Perpendicular Press	122.00	285.80	134.26
Tangential	Parallel Press	195.00	441.00	126.15
	Perpendicular Press	195.00	367.00	88.21

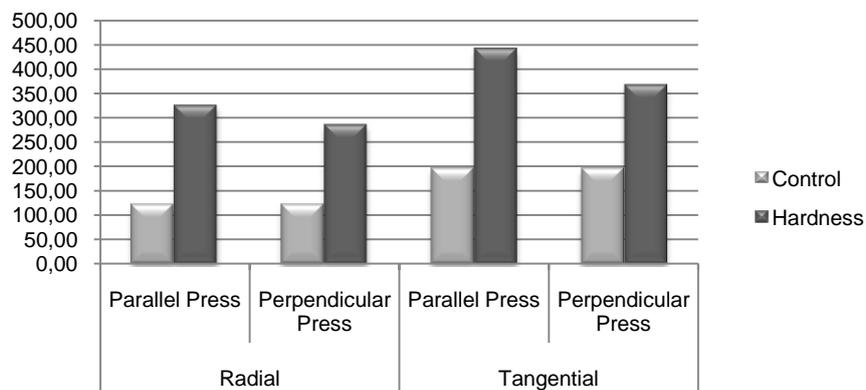


Figure 3 – Sengon hardness increase compared to control

Table 6 – Mahang hardness increase compared to control

Board Type	Test Position	Control	Hardness	Increase (%)
Radial	Parallel Press	88.20	158.40	79.59
	Perpendicular Press	88.20	183.00	107.48
Tangential	Parallel Press	113.40	168.40	48.50
	Perpendicular Press	113.40	191.60	68.96

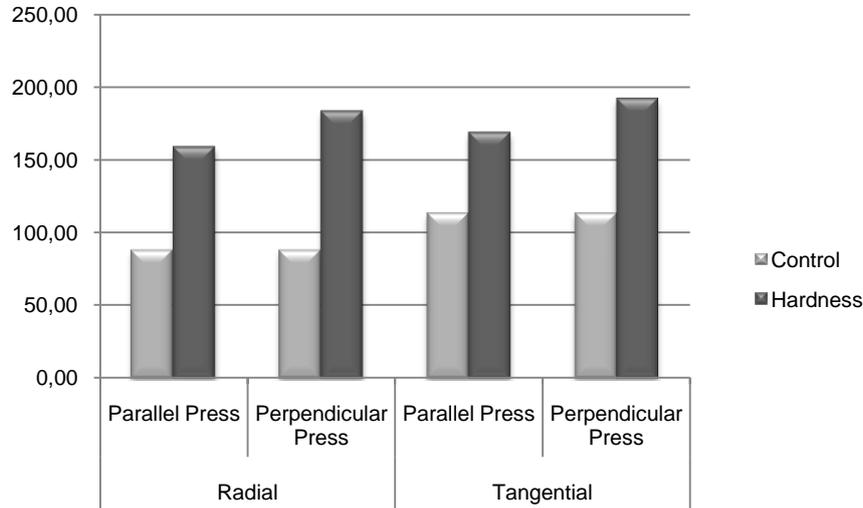


Figure 4 – Mahang Hardness Increase Compared to control

Table 7 – Densified Sengon Board Hardness Dunnet Test Result

Wood Plane & Test Position	μ_1 (Hardness)	μ_2 (Control)	$ \mu_2 - \mu_1 $	DLSD
Radial Parallel press	325.00	158.80	166.2 *	72.86
Radial Perpendicular press	285.00	158.80	126.2 *	72.86
TangentParallel press	441.00	158.80	282.2 *	72.86
Tangential Perpendicular press	367.00	158.80	208.2 *	72.86

Table 8 – Densified Mahang Board Hardness Dunnet Test Result

Wood Plane & Test Position	μ_1 (Hardness)	μ_2 (Control)	$ \mu_2 - \mu_1 $	DLSD
Radial Parallel press	158.40	100.80	57.6 *	54.49
Radial Perpendicular press	183.00	100.80	82.2 *	54.49
Tangent Parallel press	168.40	100.80	67.6 *	54.49
Tangential Perpendicular press	191.60	100.80	90.8 *	54.49

Based on Dunnet Test result, densified board density to the control value were greater than the DLSD value, indicating that there was an increase in sengon hardness and significantly higher levels of control. Figures 3 and 4 exhibits sengon and mahang radial plane hardness are smaller compared to the tangential plane. There is a difference between sengon and mahang hardness based on pressing direction. Sengon parallel press hardness is higher than perpendicular press. On the other hand, mahang parallel press hardness is lower compared to perpendicular press. This occurred due to different cell structures in each type. The densified wood cells were observed using an Electronic Microscope (SEM) Scan.

Increased sengon and mahang densified boards hardness are presented in tables 5 and 6. The tables exhibited that the increase in sengon hardness ranges from 88.21% to 166.39%, and the increase in mahang hardness ranges from 48.50% - 107.48%. Murhofiq (2000) stated that wood densification up to 50% was able to increase the hardness value of sengon and agathis tangentialplaneby 376% and 229% respectively.

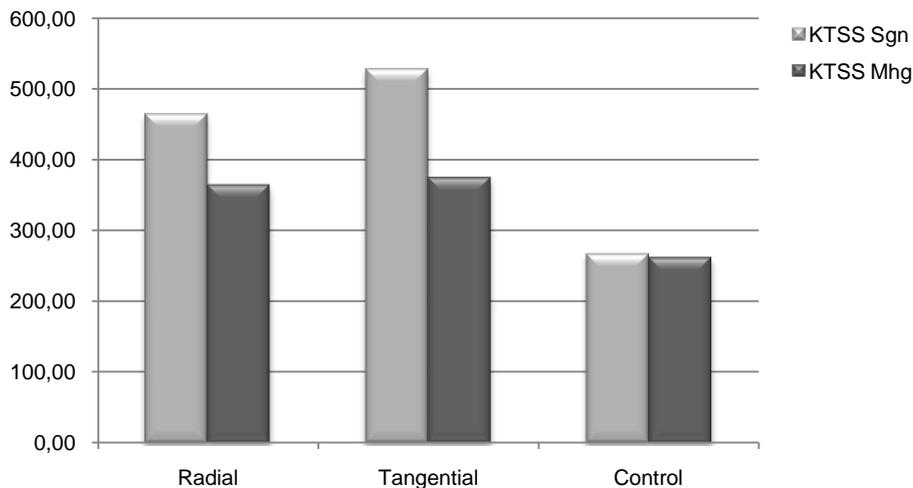
Factors influencing the value of wood hardness are density, wood tenacity, wood fiber size, binding capacity between wood fibers and wood fiber composition (Mardikanto et al. 2011). The hardness increase found in this study was lower or only about half of Murhofiq's

results. This was influenced by two things. The initial treatment was boiling at a temperature of 100 °C. On the other hand, the comparative study used an autoclave where the temperature and pressure could be freely controlled. This study used 43% target, while the comparative study used a target of 50%.

Compressive Strength Parallel to Sengon and Mahang Fiber. Compressive strength parallel to the fiber is useful if densified wood is used as poles for table legs, chair legs, cupboard frames, etc.

Table 9 – Compressive Strength Parallel to Sengon and Mahang Fiber Data

Board Type	Compressive Strength Parallel to Fiber	
	Sengon	Mahang
Radial	464.96	363.69
Tangential	528.73	374.02
Control	267.60	261.56



Description: KTSS = Compressive Strength Parallel to Fiber

Figure 5 – Compressive Strength Parallel to Fiber in Radial and Tangential Plane

The figure exhibited that compressive strength to sengon and mahang fiber is similar to the control board. However, compressive strength to sengon fiber value is more than mahang compressive strength to fiber value after pressing process. Each wood type responded differently to the densification process. The differences were caused by respective wood cell composition.

The increase of compressive strength to fiber after the densification process is presented in table 10. It exhibited that compressive strength to sengon and mahang fiber increased on the tangential plane. The compressive strength to sengon fiber is 528.72 kg/cm² on a tangential plane and 464.96 kg/cm² on the radial plane. The compressive strength to mahang fiber is 374.02 kg/cm² on a tangential plane and 363.69 kg/cm² on the radial plane. Furthermore, the compressive strength parallel to sengon fiber increase is 100% compared to control. On the other hand, the compressive strength parallel to mahang fiber increase is less than 45%. Similar to Sulistyono's research (2001), it stated that agathis compressive strength experienced 100% compared to control, about 532.74 kg/cm² to 683.68 kg/cm² compared to initial strength (control) at 360.11 kg/cm² to 367.15 kg/cm². Rakhma Hidayat (2012) stated that compressive strength parallel to jabon wood increased by 21% compared to control.

According to Seng (1951), compressive strength value between 300 – 425 kg/cm² is classified as Strength III class, 425 – 650 kg/cm² is classified as Strength II class, and >650 kg/cm² is classified as Strength I class. Densified sengon board is classified as Strength II class and densified mahang board is classified as Strength III class.

Table 10 – Compressive Strength Parallel to Sengon and Mahang Fiber Increase

Wood Type	Board Type	Control (kg/cm ²)	Compressive Strength Parallel to Fiber(kg/cm ²)	Increase (%)
Sengon	Radial	267.60	464.96	73.75
	Tangential		528.73	97.58
Mahang	Radial	261.56	363.69	39.05
	Tangential		374.02	43.00

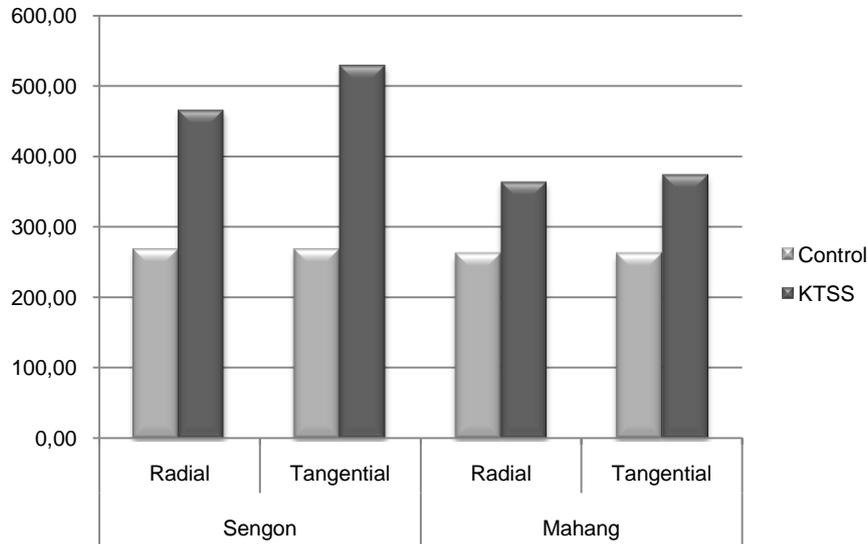


Figure 6 – Compressive Strength Parallel to Fiber Increase on Radial and Tangential Plane

The histogram exhibited that compressive strength parallel to sengon and mahang fiber is similar to control (grey histogram). The average compressive strength parallel to sengon fiber is higher compared to mahang. The compressive strength to sengon and the mahang tangential plane is higher compared to the radial plane.

CONCLUSION

Sengon and Mahang densified board density is 50% higher compared to control. Sengon board hardness increases about 88.21-166.39%. On the other hand, Mahang board hardness increases about 48.50-107.48%. Compressive strength parallel to sengon and mahang fiber increases occurred on the tangential plane. Compressive strength parallel to sengon fiber is 528.72 kg/cm on tangential plane and 464.96 kg/cm² on radial plane. Furthermore, compressive strength parallel to mahang fiber is 374.02 kg/cm² on the tangential plane and 363.69 kg/cm² on the radial plane.

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STRATEGY FOR INCREASING FARMERS' INCOME THROUGH DRY LAND RESOURCES COMBINATION IN KUPANG DISTRICT OF NUSA TENGGARA TIMUR

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ABSTRACT

Dryland farming is an activity carried out traditionally by farmers on using various resources such as the type of livestock that is kept, land for rainfed rice fields and fields. Types of plants include food crops in the form of rice and corn, vegetables, horticulture, and also labor and capital. All these resources are cultivated in combination even though they have not been allocated optimally, but this is an inseparable part of their habits, so that if an optimum model of resource allocation is found, farmers will certainly apply it to obtain maximum income. What is the combination of each resource that can generate maximum income for farmers; this is the main problem of this research. Research result; the resources owned by farmers are allocated optimally which results in maximum income, if the paddy field area is 0.58 hectares; land area for 0.64Ha corn, land for planting cassava covering an area of 4.39 Ha and for vegetables 0.06 Ha per family; raising cattle as much as 1.18 AU; pigs 0.80 AU and raising goats 0.33 AU. The optimum allocation of all resources owned by the farmer mentioned above generates income of IDR 35,249,269.12. Cattle play a payment tool for customary fines in the marriage of Atoni Meto, and as dowry.

KEY WORDS

Allocation, optimization, revenue maximization, social and cultural roles.

Climate conditions in the East Nusa Tenggara (NTT) region, consisting of a relatively long dry season (8-9) months and a relatively short rainy season (3-4) months. Thus farming in this area is dominated by dry land farming with a traditional business system. The livestock business carried out by farmers is also still traditional, which is done by releasing cattle to find their own food in public grazing fields during the day and being caged at night. This will have implications for increasing food production which runs relatively slowly (Abdurahman, Dariah and Mulyani, 2008)

There are 3 ways of raising cattle in Kupang NTT Regency, namely: a) an extensive method, namely all cattle are released to find their own food during the day and sometimes guarded by a shepherd; b) fixed tie method, where all cattle needs depend on the owner, feeding is done by cut and carry, and c) how to maintain a combination of ways a) and b) (Lalus, 2018). Meanwhile, in food crop farming, more than the types of crops, namely corn, beans, and yams are cultivated in the same area without optimum combination planning; therefore this research becomes important to do (Abdurachman, Dariah and Mulyani, (2008).

In conducting cattle business, farmers use various resources they have. It is almost certain that the allocation of these resources has not been done optimally so that the income of farmers is not maximum, because of the extensive traditional maintenance system (Awang, Ariana and Siryani, 2016). This is the main reason for the need for this research, the consideration is, although the allocation of various resources owned by farmers is not yet optimum, it is an integral part of the lives of farmers, so that an optimum resource allocation system is found. The main objective of farmers to maintain several types of livestock is as a buffer stock or buffer risk; intended not for daily consumption needs, but for socio-cultural needs such as marriage ceremonies, death and repairing or building new homes.

The important thing in an effort to improve the standard of living of farmers is through improving their farming by summarizing various alternatives in various business branches in an agricultural production process. Increasing production in the agricultural sector means finding the right way to use various resources owned; among others, the allocation of

resources owned by farmers such as land allocation: forage for livestock which includes grass and other forages, corn, rice, beans (horticulture), yams and others. Allocation of capital and labor in financing all plant production activities and types of cattle raised. How much is the allocation of each resource that can generate maximum income for farmers is the main reason for this research.

Research purposes:

- To analyze the combination of various resources owned by dryland farmers in Kupang NTT Regency;
- To assessing the role of cattle from socio-cultural aspects and economic aspects in the perspective of the community in Kupang NTT Regency.

The allocation of various resources owned and cultivated by farmers includes farming of fields and fields (rainfed and irrigation) of food crops such as maize, beans, yams and livestock business consisting of cattle, pigs, goats and chicken livestock. This combination of food crops is not done on different business areas, but is done on the same land that is not separated. This is what makes it difficult to measure production per unit area of business land. Similarly, the maintenance system for various types of livestock is still traditional.

METHODS OF RESEARCH

This research was conducted in Kupang NTT Regency, with concentrations in Taebenu District and Kupang Tengah Subdistrict, in 2018. In general, farmers in this area are not monoculture, but try to mix several species of livestock and try some types of plants in the same area.

Sample determination is done in two stages (*two stage sampling*). The first stage of the determination of two sample sub-districts, namely Taebenu and Kupang Tengah Districts, was purposive by considering having the most cattle population and also farmers working on food crops in a combination (Nazir, 2014; Singarimbun and Effendi, 2011, Silalahi, 2010). With the same consideration, two sample villages were chosen from each sub-district as follows: Oeltua Village and North Baumata Village in Taebenu District; Oelnasi village and Noelbaki village for Central Kupang areas. The second stage, the determination of respondents was also conducted purposively by considering the number and types of livestock kept, as well as various types of food crops and horticulture that were cultivated. The number of respondents for each village is as follows: Oeltua (16 respondents) and North Baumata (24 respondents); Oelnasi (20 respondents) and Noelbaki (18 respondents); the total number of respondents is 78 households.

Data collection was carried out by direct interview techniques with sample farmers based on a prepared list of questions. Data collected includes primary data and secondary data. Primary data include: the number and type of livestock kept, ownership status, length of maintenance, land area allocated for each type of plant cultivated, production per unit of cultivated land area and others. While secondary data includes, selling price per unit (both livestock and plants), all data / information needed in this study, collected from respondents through direct interview techniques using a questionnaire.

The main approach used to analyze this research data is the Linear Programming approach through the Simplex Algorithm for maximizing income from the allocation of the use of various resources owned by farmers, as instructed by Aritonang R. (2016); Nasendi and Anwar (1995); Nesa Wu and Richard Coppins (1981). The importance of this analysis is intended to find out that the use of resources owned by farmers has been allocated optimally? The problem of resource allocation in traditional farmers' livestock raising must be formulated in advance into the general problem of linear programming as follows:

$$\begin{aligned}
 Z_{\max} &= c_1X_1 + c_2X_2 + \dots + c_jX_j + \dots + c_nX_n \\
 a_{11}X_1 + a_{12}X_2 + \dots + a_{1j}X_j + \dots + a_{1n}X_n &\leq b_1 \\
 a_{21}X_1 + a_{22}X_2 + \dots + a_{2j}X_j + \dots + a_{2n}X_n &\leq b_2 \\
 a_{i1}X_1 + a_{i2}X_2 + \dots + a_{ij}X_j + \dots + a_{in}X_n &\leq b_i \\
 a_{m1}X_1 + a_{m2}X_2 + \dots + a_{mj}X_j + \dots + a_{mn}X_n &\leq b_m \\
 X_j &\geq 0 \text{ for } j = 1, 2, \dots, n
 \end{aligned}$$

Where: C_j = Parameters used as optimization criteria or decision-making variable coefficients in the objective function; X_j = Change in decision making or activity you want to find, which is unknown; a_{ij} = technology efficiency / decision-making variable (related activities) in the i -th constraint; b_i = Limited resources, which limit the activity or business concerned from the i th constraint; Z = Scalar value for decision-making criteria for an objective function.

RESULTS AND DISCUSSION

The dominant farming in Kupang Regency is farm farming. The cultivation of fields in research locations in general has adopted a system of permanent farming and is familiar with fertilization and pest eradication technology. Schmitt 1991, Chavas 2001, Summer and Wolf 2002; cited by Bowman and Zilberman (2013) that, in the 20th century brought significant changes to the global agricultural economy. Meanwhile, farming operations are generally still owned by farmer families, and farm size, management and production methods as a whole are more advanced in mechanization and specialization compared to before.

A quite encouraging development is that, farmers in the sample locations have applied technology without tillage. As many as 78.21% of farmers have fertilized, 75.59% have carried out prevention and eradication of plant pests. For paddy fields (both irrigated and rainfed rice fields) 97.44% of farmers fertilize and 96.15% do pest control. Even some farmers whose entire production has been commercial in nature means that most or almost all of their produce is intended for the market.

The results showed that of all sample farmers 97.44% of them had used fertilizers and 96.15% used pesticides and weed drugs, both for rice fields and gardens or fields. The results of the interview indicated that, one part of the land preparation effort before planting was spraying the grass, because before the farmers planted, the grass had grown, so it was sprayed so as not to interfere with plant growth. This, according to the farmers, will save labor, especially in weeding. According to Rahim and Dwi Hastuti (2008) that the actual use of fertilizers in a farm is likened to a human being, in addition to consuming staple food nutrients, it is also necessary to consume vitamin nutrients as an additional staple food. Likewise with plants, besides water as its main consumption, fertilizer is needed in optimal growth and development. The type of fertilizer used by farmers is organic fertilizer and inorganic fertilizer. Organic fertilizers include; manure, green manure and compost; while inorganic fertilizers include urea, TSP and KCL and Ponska.

Of all respondents interviewed, 75.76% of them used fertilizer. There is an interesting phenomenon, namely, the use of fertilizers by farmers is mostly done in the dry season in "corn water" which is an area planted with corn and beans and drained from the nearest water source that can reach the land, at least once a week. While gardens planted with corn by farmers during the rainy season, 78, 21% of them do fertilization.

The average area for land owned by farmers in the study location was 0.64 Ha, for rainfed rice fields it was 0.58 Ha. This land has been cultivated by 98.76%, and 94.12% has been planted. Of the total area which had been planted 92.42% of the produce and harvested by farmers, the remaining 7.58% did not produce. This is caused by many factors, among others, lack of rainfall or after planting rain no longer falls for quite a long time, so that sometimes farmers have to replant when it rains again or even late planting or being attacked by pests.

The labor force used in farming activities in the fields / gardens consists of human labor originating from within the farmer's family and from outside the family. The total amount of labor available to a farmer is generally used to work in the fields (both irrigation and rainfed) as much as 52.08% and 47.92% work in fields or gardens. The availability of labor as intended for various activities such as plowing, planting - weeding, and harvesting. According to Priyanti, Sinaga Syaukat and Kuntjoro (2008) that the use of labor in the family is allocated to rice farming, cattle business, non-integration farming, while the outpouring of labor as laborers on farms owned by other people and business workers outside agriculture. The demand for labor outside the family is carried out for rice farming and non-integration

farming. The use of this family workforce is distinguished according to male, female and child laborers by calculating the number of hours in a year.

According to Parson, cited by Hermen Malik (2015), the characteristics of rural communities with social and cultural systems are as follows: 1) affinity, relation to feelings of affection, love, loyalty and intimacy. Its form is the nature of helping help among the people; 2) collective orientation, increasing togetherness, disliking self-assertiveness; 3) particularism, all things related to what is specific to a particular place or area and 4) description, relating to quality and special characteristics. Such characteristics of society will have an effect on the farming that is carried out, especially in concocting various resources owned in such a way as to obtain maximum income.

Today, farming in the fields or gardens of the farmers is much helped by the availability of various weed killers or grasses at affordable prices. From the interviews, it was found that, 75.64% of the total respondents had used grass spraying drugs and 78.21% had used fertilizer. As for rice fields, 97.44% of farmers have used fertilizers and 96.15% use drugs to protect pests and grasses. As a consequence of the use of fertilizers and medicines for spraying pests and grasses, the cash outlays by farmers are as follows: the average cost for purchasing fertilizers is IDR 766,121.79, and for the purchase of pesticides and grasses, the average is IDR 333,846.15 for each planting season.

The non-cash costs incurred to pay labor in field farming are 8.01% (IDR 56,690.14) originating from within the family while 91.99% (IDR 600,202.56) comes from outside the farmer's family. The use of labor from outside the family is mutual cooperation, (the local term "Hokatofa") is generally in the activities of weeding and planting.

In this "hokatofa" activity, it is the landowners who bear the consumption during the activity. This means that cash or non-cash expenses occur. Cash expenditure is intended to buy side dishes and rice. The results of this study indicate that cash expenditures in weeding and or planting activities averaged IDR 707,371.79. It is realized that the value of this amount of money is too small for the present. Of the total respondents interviewed, it turned out that only 9.09% of respondents carried out activities like this.

If the activities mentioned above do not involve labor from outside the family, then the time needed especially for weeding activities can reach 2-4 weeks (on average 3 weeks), if the activity is carried out continuously every day. The reason is, the time needed during that time is, if in the land preparation activities and not sprayed first on the grass that grows before planting activities are carried out.

These workers (especially those involved in planting activities) also returned to use during the corn harvest. Where each worker gets an average salary of IDR359,015.- or equivalent to 2.69 real maize, where 1 (one) real is equal to 400 grains of corn. So if the labor wage is as high as above, if it is converted into the amount of corn which is as many as 1,077 grains.

While labor is involved in paddy fields, namely in the activities of planting, weeding and harvesting. Workers for planting activities are generally paid for with rice. For 1 (one) hectare are (Ha) rice fields are paid for by rice as much as 30 blik (local size), where 1 rice paddy if converted in kilograms as much as 15 kg or 7-10 kg of rice. So if 30 pieces are converted in kg, meaning that every ha of paddy fields, farmers must spend an average of 240 kg of rice as labor costs. The amount of wages if converted again into rupiah, means that in one planting season the farmer must spend as much as IDR 1,200,000 - as labor wages. Whereas if the labor costs are paid in cash, then the salary is only IDR 500,000 - IDR 1,000,000 per ha or an average of IDR750,000 per ha. The same labor is used again during harvest activities, and is paid with rice as much as 1 (one) rice paddy per day. For example the amount of labor used at the time of harvest of 5 people, then at the time of harvest, every day the owner of the rice field must issue rice as a labor wage of 5 months. In addition to the wages of labor as mentioned above, farmers also pay cash fees for tractor rental on average per hectare of IDR586,730.77.

Most of the respondent farmers (61.54%) prepared corn seeds they bought from the store, and the remaining 38.46% used corn seeds which were prepared themselves at harvest time. The number of seedlings prepared by the farmer from the yield, on average 1

(one) "real" is equal to 400 grains of corn, which if converted into units of kilograms will be equivalent to 50 kg (average 8 grains = 1 kg). When asked, why prepare as many seeds as that? The reason is just in case because old stored corn is usually partly damaged by eating moth (a type of louse) or with the local term "fufuk". Whereas by buying from a store, the average cash expenditure that must be made by farmers is IDR 167,175.32.

Production and use of production results from Farming and Livestock Businesses. The discussion about the use of corn production in this study is not expressed in physical units, but is directly converted into the value of money (rupiah). The allotment of corn production by farmers in the research location is to consume farmers with their families, sell it to the market, and pay for labor and supply seeds. In general, the production of "corn water" is mostly aimed at the market; this is mainly done by farmers in two research villages, namely villages: Oeltua and North Baumata (100%). As for respondents in the village of Oelnasi, from all farmers the respondents stated that they did not work during the dry season while the respondent farmers in the village of Noelbaki cultivated or planted corn in the dry season by 22, 22%.

Contribution of food crops (including beans) to income (cash 6.70% and non-cash 12.75%) household or overall contribution of food crops farming is 16.03%. Livestock business contributes 24.66% for cash income and 57.41% for non-cash income of dryland farmers in the study area, and overall the contribution of livestock business is 66.70%. Whereas the contribution of other sources to farmers' income is 1.71%.

In general, livestock ownership (especially cattle) is self-owned (96.32%) while the remaining 3.67% maintains or maintains livestock belonging to other people with a profit sharing system. The revenue sharing system encountered at this research site is that the profit sharing system is as follows, 70% of the difference between selling price and buying price for fattening farmers and 30% for livestock owners. So, if a calf is purchased at a price of IDR 3 million, after being fattened for approximately 6 months, then sold at a price of IDR 6 million, then the livestock owner gets IDR 1,900,000, while IDR 2,100,000 for the farmers who are fattening.

The average ownership of 4.32 AU cattle, 1.31 pigs, 0.07 AU goats and chicken 0.09 AU. Whereas if fattening, then the division is like in cattle. For chicken livestock, it does not occur as in the two types mentioned above, because in general the chickens that are kept are free-range chicken and in very limited quantities. So that if an outbreak occurs, all chickens will die, because farmers in this location almost never vaccinate. Of all respondents, only 27.27% vaccinated chickens raised, including 4.54% of broiler breeders.

The motive of farmers in raising livestock is as a source of income (economic motives), as savings that can be cashed at any time if the need for cash is for an urgent need, consumption and socio-cultural interests. The results of interviews with respondent farmers, almost never found a single motivated farmer in raising livestock. Except for broiler breeders (purebred chicken) solely aimed at the market. Extensive maintenance systems are characterized by: 1) farmer farmers have not been market oriented (market oriented), 2) health care has not been properly considered, 3) livestock regeneration has not received adequate attention and 4) production cannot keep up with increasing demand, both in the form of live animals and in the form of meat (Lalus, 2007). Schiere, Ibrahim and van Keulen (2002) state that in the sustainability of livestock raising systems, there are a number of specific objectives as follows: 1) livestock play an important role in the sustainability system of the existence of farming systems, especially mixed food crops and livestock farming, 2) classification of livestock business systems, including differences in livestock production and mixed farming, in access to land, labor and capital.

In terms of socio-cultural interests, especially cattle and pigs have an important role in traditional ceremonies such as marriage, death. According to Hidajat (1976), cattle act as a payment tool for custom fines in the marriage of Atoni (timor people), for example in a love relationship between a young man and a young woman, it turns out the young woman is pregnant before marriage, and if the young man refuses to marry the girl, then the young man is fined a sarong and a cow and a pig. The use of the word *Atoni Meto* by Hidajat (1976) is actually inappropriate, because the word "Atoni" itself in the context means people. So

actually what was meant by Hidajat was "Atoni Meto" (literal translation was land people) or commonly translated as Timorese.

For example, in the engagement, if later the young man does not want to continue the engagement to the marriage level, then the young man is fined a cow to cancel the engagement and at the same time give the girl the freedom to marry someone else. While the fine on "eloping" is 7 (seven) cows, a silver bracelet and a blanket. It was also explained that, according to the Atoni people, to build a new house not by selling rice or corn or beans but selling cattle. It is easy to understand that if cattle are valued with money then it has a much greater value than the production of food crops and horticulture in the same calculation unit. In Atoni Meto weddings in Kupang Regency, beef and pork are a must. Almost never found a marriage party Atoni Meto without the two types of meat mentioned above. It is very coincidence that 87.18% of the respondents in this study were Timorese, so for that reason the discussion on the socio-cultural side as above was on the Timorese tribe. Another important role of cattle in Atoni Meto culture is as "belis" (dowry). From an economic standpoint, the contribution of livestock business to farmers' income is 59.75%. From the magnitude of this donation, cattle gave the largest contribution of 75.35%, pig livestock 20.81%, goat livestock 1.90% and chicken 1.98%.

In essence all activities on family farming cannot be separated from one another, but must be seen as a whole. Thus in discussing the combination of branches of food crop farming and livestock business, it must also be seen as a single unit.

The results of Masbulan's research (1999) show that the research was conducted to obtain a conceptual basis for the development of agricultural business systems in the critical area of Yogyakarta, as the smallest producer unit, specifically to: (1) obtain an optimal dairy cow-based farming system and obtain maximum income with resources available to farmers and with capital assistance from funders, (2) obtain a model for developing a dairy cow-based farming business system in the critical land area of the Special Region of Yogyakarta.

The method used is a stepwise problem solving approach in the agricultural business system in Glagaharjo Village, Cangkringan District, Sleman, which begins with a diagnostic survey through "Rapid Rural Appraisal (RRA) and Agro-ecosystem Analysis" activities. Next, a farm record keeping and survey is held by interviewing 40 respondents purposively. By choosing a linear planning model (MPL) a normative problem solution is produced, namely problem solving that will produce maximum benefits within the constraints of each business activity to measure the effectiveness of the development of a dairy cow-based agricultural business system. The results showed that the management of land resources had not been carried out optimally, from the average ownership of 1.5 ha of legal land to only 0.6 ha that was processed, so that the appearance of the level of agricultural business yields and farmers' income was relatively low. The optimal implementation of a dairy cow-based farming business system is an alternative improvement area. By including the role of the dairy farming cooperative as a business driver (Model Scenario I), it can increase farmers' income. Of the 1.5 ha of dry land cultivated and the maintenance of dairy cows a maximum of 3 Livestock Units (AU) at optimal conditions, the income reaches IDR 20,385,340, - during the production period of 8 years. The amount of income can be increased by applying Scenario II Model, which is the inclusion of venture capital with a soft interest rate of up to IDR 36,176,070, - for 8 years, other benefits obtained, namely land resources and family labor are used optimally, increasing the scale of business of dairy cows to 4 ST, and if developed to 1,400 farmers according to plan, it will be able to absorb as much labor as 230 people (year 1), which tends to increase until the eighth year reaches 1,154 people / year. In the end it can be concluded that the development of a dairy cow-based agricultural business system can strengthen the economic resilience of families in critical land areas and can gain land conservation development programs.

The results of the input-output analysis indicate that the total average net income of each business branch is as follows: for paddy rice (X1) of IDR 5,745,000.00; corn (X2) of IDR 2,850,555.56; legumes (X3) of IDR 1,029,516.67; and cassava (X4) of IDR 538,350.00. For livestock business includes cattle (X5) of IDR 9,638,811.00; pig livestock (X6) in the amount

of IDR 3,561,428.57; goat livestock (X7) of IDR 1.011.111,11; and chicken (X8) of IDR 1,113,000.00.

The limiting factors or constraints that are considered in this study are the average land area: 0.65 ha of rice for the type of rice plant; 0.62 Ha for corn, for legumes is 0.12 ha and for cassava plants is 1.31 ha. Cattle as much as 4.58 AU; 0.17 AU goat cattle; 0.80 AU pigs and 0.13 AU chickens AU. The amount of labor and capital available for the various activities above are 1242.55 HKP and Rp. 13,043,918.91.

The mathematical model for a combination of food crop farming and livestock business is formulated as follows:

$$\text{Max (Z)} = 5.745.000X1 + 2.850.555,56X2 + 1.029.516,67X3 + 538.350X4 + 9.638.811X5 + 3.561.428,57X6 + 1.011.111,11X7 + 1.113.000,00X8$$

Constraints functions:

$$\begin{aligned} &1X1 + 0X2 + 0X3 + 0X4 + 0X5 + 0X6 + 0X7 + 0X8 + 0X9 + 0X10 \leq 0.62 \\ &0X1 + 1X2 + 0X3 + 0X4 + 0X5 + 0X6 + 0X7 + 0X8 + 0X9 + 0X10 \leq 0.56 \\ &0X1 + 0X2 + 1X3 + 0X4 + 0X5 + 0X6 + 0X7 + 0X8 + 0X9 + 0X10 \leq 0.12 \\ &0X1 + 0X2 + 0X3 + 1X4 + 0X5 + 0X6 + 0X7 + 0X8 + 0X9 + 0X10 \leq 0,19 \\ &0X1 + 0X2 + 0X3 + 0X4 + 1X5 + 0X6 + 0X7 + 0X8 + 0X9 + 0X10 \leq 4.58 \\ &0X1 + 0X2 + 0X3 + 0X4 + 0X5 + 1X6 + 0X7 + 0X8 + 0X9 + 0X10 \leq 0.17 \\ &0X1 + 0X2 + 0X3 + 0X4 + 0X5 + 0X6 + 1X7 + 0X8 + 0X9 + 0X10 \leq 1.31 \\ &0X1 + 0X2 + 0X3 + 0X4 + 0X5 + 0X6 + 0X7 + 1X8 + 0X9 + 0X10 \leq 0.13 \\ &589X1 + 182X2 + 180X3 + 180X4 + 136X5 + 132X6 + 27X7 + 97X8 \leq 1523,00 \\ &696676,47X1 + 478966,47X2 + 414166,67X3 + 623316,67X4 + 4899583,26X5 + 3929285,71X6 + 1035361,11X7 + 409800X8 \leq 13.043.918,91 \end{aligned}$$

Table 1 – Production Factors Using per Unit Activities on Food Crops Farms and Animal Farm in Kupang Regency

Production factors	Available	X1	X2	X3	X4	X5	X6	X7	X8
Land (Ha):									
Paddy	0.62	1	0	0	0	0	0	0	0
Corn	0.56	0	1	0	0	0	0	0	0
Horticulture	0.12	0	0	1	0	0	0	0	0
Ubi2an	0.19	0	0	0	1	0	0	0	0
Livestock (AU)									
Cow	4.58	0	0	0	0	1	0	0	0
Goat	0.17	0	0	0	0	0	1	0	0
Pig	1.31	0	0	0	0	0	0	1	0
Chicken	0.13	0	0	0	0	0	0	0	1
Labour (DWM)	1523.00	589.00	182.00	180.00	180.00	136.00	132.00	27.00	97.00
Capital (IDR)	13.043.918,91	696676,47	478966,47	414166,67	623316,67	4899583,26	3929285,71	1035361,11	409800

To get the optimum combination of programmed resources, as a first step is to enter the slack variable so that a basic program is feasible (Iteration I in the Table). In this feasible basic program (Iteration I), farmers have not carried out activities so that the income earned is zero. The combination of resources owned by farmers as presented in the table above, through the Simplex Algorithm, farmers' profits can be increased little by little.

In iteration II, the farmer decided to only raise 4.58 AU cattle with an income level of IDR 25,660,930.26. - with reduced cost (marginal value product=MVP) of IDR 9,638,811, - It turns out that at this stage, the activity of planting rice in rainfed rice fields, planting corn, beans, sweet potatoes, raising livestock for pigs, goats and chickens, can still be implemented. This condition can be seen in the Zj-Cj line (opportunity cost) which is still negative. This implies that if all of the above activities are carried out in the amount of one unit each, it will increase farmers' income as much as the value of each of these activities. Therefore, this program is a feasible basic program, but it is not an optimum program, because there are still activities that are still negative, so it can still be continued to the next iteration.

The next program (iteration III), the farmer decided to increase the activity of processing and selling rice production on a rice field farm covering an area of 0.62Ha. The farmer's decision to add to this activity caused his income to increase to IDR 28,373,088.13. At this stage, rice farming activities have a shadow price of IDR4,374,448.17, which means that if the farmer decides to add another unit of paddy activities or to plant rice, then an additional income of that value will be obtained. It seems that up to this stage, management

of maize, yams, raising goats, cattle and chickens as well as farming activities as shown in the Zj-Cj line is still worth less than zero or negative.

Based on the description in the third iteration above, this program is still continued to iteration IV, which includes the activity of planting corn on an area of 0.56 ha. It turned out that the farmers' decision to include the activity of planting corn caused an increase in their overall total income to IDR 29,441,735.02. This program is also a basic program that is feasible but not optimal, because the values of other activities on the Zj-Cj line are still negative. So that it can still be forwarded to the next iteration (iteration V).

Until the V iteration, the combination has not reached its optimum because there is still a negative value, which means that farmers' income can still be increased if farmers decide to add activities to grow yams, raise goats, pigs and other activities other than farming such as masons, wood and so on. This is indicated by the values on the Zj-Cj line which are still negative.

In the V iteration, the decision taken by farmers is to grow vegetables in a garden area of an average of 0.12 Ha per family. As a result of this decision, farmers' income increased again to IDR 29,503,853.23 This VI iteration is a sound basic program, but it is not an optimal program, because there is still a negative Zj-Cj value. Thus, business combination activities can still be continued to VI iteration.

In VI iteration, farmers decided to add 1.31 AU (Animal Units) per family to raise pigs because this activity had a Reduced cost (MPV) of IDR 1,113,000.00, which means that the income will increase by that value if they carry out raising goats. With the additional activities of raising goats, farmers' income increased to IDR 29,529,621.83. This VI iteration is an iteration where the optimum combination of various business branches or production factors owned by farmers. It is said to be the optimum combination because all the values in the Zj-Cj line are no longer negative.

Optimization of farmer income in Kupang Regency as indicated by the linear programming approach through the simplex algorithm above that the income of dryland farmers in the area includes land allocated for the overall dryland farming activities covering an average area of 0.12 Ha per household; cattle 4.58 AU; 0.17 ST goat cattle; 1.31 AU pig and 0.09 AU chicken with income of IDR 29,529,621.83.

CONCLUSION

The types of plants used by breeders in Kupang Regency include: rice, corn, beans consisting of peanuts, long beans and rice beans; sweet potatoes include: cassava (cassava) and yams. While the types of livestock kept include: cattle, pigs, goats and chicken livestock.

The optimum combination that produces maximum income for farmers in Kupang Regency is IDR 35,249,269.12. This happens if the cultivated land area is 0.59 hectares; land for planting corn covering an area of 0.62Ha; for cassava with an area of 0.52 hectares and for beans covering an area of 0.45 hectares. While the types of livestock include livestock: cows 4.58AU; 1.31AU pigs, 0.17AU goat and 0.10AU chicken.

Contribution of food crops (including beans) to income (cash and non-cash) of farmer households is 29.30% and 19.20% or overall the contribution of food crops is 22.11%. Livestock business contributes 70.70% for cash income and 80.80% for non-cash income of dryland farmers in the study area, and overall the contribution of livestock business is 77.89%. Whereas those from other sources contributed to farmers' income of 1.40%.

Contributions from rice, corn and horticulture farming (long beans and peanuts) to cash income of 12.27%; 11.52%; 1.12%; 0.96%. The contribution of rice and corn to farmers' non-cash income is 12.45% and 6.18%; Long beans do not have a contribution to non-cash income, because this type of plant is the main purpose of its business for the market, meaning that all of its products are for sale. There were no leftover products intended for seedlings for the following planting season, because the seeds for the next planting season were purchased from the store. Peanut contribution to non-cash income is 0.44%.

Contributions from each kind of livestock are as follows. Cattle provide the largest contribution to cash income of 39.13% and non-cash income of 49.80% compared to other types of farming. Pigs are the second largest contributor to 26.70% in cash income and 25.27% in non-cash income. The contribution of goats and chickens to cash income is 1.69% and 2.80% respectively, while non-cash income is 1.13% and 0.30% respectively.

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THE INSTITUTIONAL SUPPLY CHAIN OF RABBIT COMMODITIES IN BATU CITY OF EAST JAVA

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ABSTRACT

Rabbits are alternative livestock that have the opportunity as a provider of healthy and high-quality animal protein sources. In an effort to develop commodity markets and improve the welfare of farmers/breeders, need to be well understood characteristics and the institutional of farmers, suppliers and markets. This study aims to identify key actors as well as institutional patterns of rabbit commodity supply chain for broiler purposes formed at the study site. Using descriptive analytical research methods, research was conducted in Batu City, East Java in December 2018 - March 2019. The results of the study indicate that the goals of rabbits raising by the breeders are more dominant for sale in the form of weaning kits. Cutting the livestock for broiler purposes is conducted on rejected rabbits. Key players in the rabbit supply chain for broiler purposes consist of breeder as producer, group of breeder, wholesaler at subdistrict level, wholesaler at regency level, as well as culinary traders based on rabbit meat. The most strategic role in the whole chain is in the wholesaler at regency level because they have access to farmers/breeders as well as to middleman inside and outside Batu city and have access to market destinations. The policy recommendations produced are the development of rabbit agribusiness for broiler purposes should be carried out in an integrated manner in the whole chain, increasing the active role of extension agents in providing assistance to farmers/breeders and also increasing the government's role in introducing rabbit meat to the community.

KEYWORDS

Rabbits, rabbit meat, supply chain actors.

The supply of meat for the Indonesian people consumption mostly comes from conventional livestock such as cows, chickens, goats, sheeps, buffaloes, and pigs (Pratiwi, et. al, 2017). However, until now the production of meat from these species has not been able to meet the needs of the community so that must conducted the import policy. Considering to this fact, certainly, an alternative strategy is needed to produce animal food in a sustainable manner, one of them is by developing various livestock (rabbits) (Bahri, *et.al*, 2012). Rabbit is a potential livestock commodity as a provider of meat, because it has a fast rate of growth and reproduction. One reproductive cycle of a rabbit can produce 8-10 kits at the age of 8 weeks (Marhaeniyanto & Susanti, 2017). Rabbit's daily weight gain reaches 32 g/hour/day and gives meat production up to 40 - 120 kg/year with the B/C value Ratio 1,42 to 3,55 (Raharjo, 2015).

Directorate General of Animal Husbandry/DITJENNAK data in 2012 stated that the fulfillment of meat demand derived from rabbit livestock from 2010 to 2011 increased by 71%. Commercially produced rabbits are very beneficial because they can produce quality meat with low production costs (Dalle Zotte, 2000; Dalle Zotte et al., 2011; Dalle Zotte & Cullere, 2019; Jamshidi et al., 2019; El-Deek & El-Sabrou, 2019; Rizwan et al., 2019). In Indonesia, the market development of rabbit products is currently more dominant in Java, such as in Lembang (West Java), Tawangmangu (Central Java), Sarangan and Batu (East Java) (Raharjo, 2008; Siregar, et al, 2014).

The demand for rabbit meat is increasing from 2007 which was only 50 kg/day until in 2015 reached 200-250 kg/day (Batu City Central Bureau of Statistics, 2015). With the high potential of breeders, it is expected to produce high quality rabbit meat that can be used to fulfill community nutrition and help meet market demand for rabbit meat. The distribution of rabbit meat that occurred in Batu City encourages distribution actors such as breeders, wholesaler, as well as owners of culinary businesses based on rabbit meat as intermediaries that deal directly with end consumers to carry out marketing strategies in carrying out their activities.

As stated by Chabela et al. (1999); Lukefahr (2007); Harris (1984); Anous (2010); Alturiqi et al. (2012) that the industry of rabbit development consists mainly of farmers with limited resources who maintain small-scale operations with the aim of producing more meat and income, where rabbit development programs are based on clear objectives and supporting goals. So that to conduct marketing activities requires a systematic marketing strategy namely a number of integrated actions that are directed at achieving sustainable competition (Wicaksono, 2017).

Sources of livestock industry growth from the demand side are determined by the factors of population and its growth (Delgado, 2005; Merino et al., 2012; Steinfeld et al., 2013; Herrero et al., 2016; Henchion et al., 2017; Lassaletta et al., 2019; Sheng & Song, 2019; Besbes et al., 2019; van Zyl & Saayman; 2019), income level, the phenomenon of urbanization and market segmentation, and consumer preferences (Ilham, 2017). One of the facilitating factors in livestock development is in its efficient marketing field. Marketing activities play an important role in the continuity of the livestock business. The marketing system is said to be efficient if it can provide a balanced remuneration to all marketing players. But with a high level of competition, every market actor must have an appropriate marketing strategy so that it can compete with others.

Triyanti, (2015) states that marketing through large traders experiences ups and downs in terms of business sustainability and most are not financially independent. According to Daryanto (2009) there are four steps in implementing supply chain management that need to be considered by relevant stakeholders in an effort to increase the competitiveness of livestock products, namely: (1) creating relationships between chains to be more specific to the business sector so that a pattern that is mutually integrated and related is formed; (2) management support starts from the process of planning, organizing, coordinating the implementation up to the control; (3) build partnerships in an agreement on the whole chain as well as (4) build an integrated information system in every part involved in the supply chain system. From the above explanation then it is necessary to examine regarding with the key actors and institutional patterns of supply chain for rabbits commodities in Batu City.

METHODS OF RESEARCH

The method used in this study uses descriptive analytical research methods. Descriptive research method is a research method that seeks to reveal the facts of an event, object, activity, process and also human beings "as it is" at the present and in the period that is still possible in the memory of the respondent. Data collection techniques were by observation, interviews, and documentation. Determination of the location of the study was carried out by purposive sampling, namely in Bumiaji Subdistrict, Batu City, East Java with consideration: 1). It is a population center area and development of rabbit livestock in Batu City, 2). The population of rabbits in Bumiaji Subdistrict is the largest compared to other sub-districts namely 80,4% from the total rabbit population in Batu City, 3). It is an area of agricultural production center, where there are many leftovers or agricultural wastes that can be used as feed ingredients for rabbits, 4). It is an area that has easy access to transportation facilities, 5). Geographical location that supports the development of rabbit livestock.

The data used in this study are primary data and secondary data. Primary data is obtained by conducting direct interviews with respondents consisting of farmers, traders (wholesaler at subdistrict level, wholesaler at regency level and culinary traders based on

rabbit meat, group of rabbit farmers/ breeders and the local Livestock Service). The aspects studied include the key factors involved in the whole chain, their status and role as well as the institutional pattern of the rabbit commodity supply chain for broiler purposes at the research location.

While secondary data focus on data and information about population development and rabbit production and the results of previous studies related to rabbits. Research is limited to rabbits for broiler purposes. The time of the study was carried out in December 2018 - March 2019. The types and number of respondents as shown in Table 1.

Table 1 – Type and Number of Respondents

No	Types of Respondents	Number (person)
1	Rabbit Breeders	20
2	Groups of Rabbit Breeders	2
3	Wholesaler at subdistrict level	2
4	Wholesaler at regency level	2
5	Culinary traders based on rabbit meat	1
6	Agriculture Service	2
	Total	29

RESULTS AND DISCUSSION

Based on the survey results, the average rabbit breeder in the study location is classified into productive age namely 15 - 64 years old equal to 95%. With a higher average productive age, then this area is a potential area for rabbit livestock development because breeders have the good physical condition and thinking ability so they can improve their skills and knowledge in raising rabbits. Utami (2015) states that age affects a person's ability to work. This is in accordance with the opinion of Poluan, et al (2017), which states that the age level affects a person's ability to carry out activities either physically and different thought concepts.

Formal education that has been taken by respondents as many as 60% is junior high school. The large number of respondents who have low levels of education certainly can inhibit the adoption of innovations in technology development and also information. Mulyawati, et al. (2016) stated that the education level of farmers can influence farmers in adaptation and innovation in raising livestock. The level of education plays a role in supporting farmers' knowledge so that the higher the level of education will be easier in accepting and absorbing new innovations and ultimately can apply the new technology according to the real conditions in the field so that productivity and income will increase (Emawati, 2008).

The experience in raising rabbits of the respondents showed that the most were between 6 - 10 years (55%) and which showed an experience of rising more than 10 years equal to 30%. The length of experience can help farmers/breeders in carrying out their business because breeders can be easier in making a decision regarding the management of their business as well as knowing and are more skilled in dealing with problems in their livestock business. Sarjono, et al (2019) states that age, length of livestock raising, number of livestock, gender, and level of education cause differences in the mindset that will influence the decision making process and adoption of technological innovation.

The main livelihood of the respondent was 55% as farmers. Rabbit farming is a side business that is a savings and also cash income outside of their farming business. The family is the main source of labor for rabbit farms in Bumijati Subdistrict. The use of family labor is generally widely used to look for forage food carried out together with agricultural activities, feeding the livestock and also cleaning the cages. The use of family labor is considered to be more efficient and can reduce expenditure costs to a minimum.

The results of the study in the field show that the purpose of raising the rabbits in this area is dominant to be sold as weaning kits (age of 25-30 days) for ornamental purposes. Cutting the livestock for broiler purposes is conducted on rejected rabbits. The average ownership of rabbits by farmers/breeders shows that farmers/ breeders with a business scale

<50 brooders amounted to 19%, business scale 50 - 100 brooders as many as 48% and the remaining 33% are farmers/breeders with a business scale of more than 100 brooders. This condition shows that at the study location, the scale of rabbit farming is still dominated by middle-scale farmers/breeders.

The level of profit from livestock business is determined by whether efficient or not the use of production factors. Elements of efficiency in livestock business are closely related to the scale of business owned; on a larger scale of business has a better level of efficiency, which is indicated by the optimization of production produced. According to Tohir (1991) the success in livestock business income is strongly influenced by the scale of business or the amount of livestock ownership by the farmer/breeder itself, where the more livestock they have, the greater the profit and increase in the farmer's/breeder's income.

The types of rabbits that are commonly raised by breeders are local type rabbits, angora, and lion. The feed is given in the form of complete feed and forage feed. The forage given to livestock is dominated by vegetable waste such as cabbage leaves and carrot leaves as well as several types of grass that was around the farm location. According to Sulistyarningsih, et.al (2013) the provision of agricultural waste as rabbit feed, has a residual content that is still below the prescribed limit so that rabbit meat remains safe for consumption by humans.

From the results of the study in the field, 80% of respondents did not calculate in detail the financial value of their livestock business. The sale of livestock for broiler purposes is carried out on rabbits that are unproductive (rejected) with unplanned and unscheduled sales times. The unplanned sale of rejected rabbits for broiler purposes at the farmer/breeder level will result in unplanned rabbit meat production in Batu City. According to Priyanti et al. (2012) the availability of rabbit meat with good quality, good and correct meat processing and competitive prices are the drivers of consumer demand for rabbit meat which can ultimately increase the growth of the rabbit meat market in the community.

Marketing of broiler rabbits through groups was found in one livestock group in Dusun Binangun, Bumiaji Village, Batu. This group focuses on the development of rabbits for broiler purposes. The type of rabbit that is cultivated is a type of New Zealand rabbit. The group here acts as a provider of seeds and also a place to market rabbits from members.

One-month-old rabbits (weaning) will be handed over to members to be raised and enlarged for 50 days. After three months of age with a minimum weight of 2 kg, rabbits will be resold to the group. Members will be taught the good maintenance procedures so that they can produce satisfactory production.

The feed given to livestock is a pellet which is the production of the group itself. The price received by the members has been determined from the start by the group, so members do not need to worry about having difficulty selling their livestock products and also know the selling price of livestock from the beginning.

At the time of the research, from 20 group members not all members had the opportunity to carry out rabbit enlargement. This is because there are not many livestock populations in the group, but for the long term it is planned that all members can enlarge rabbits and the results will be marketed through groups. At the present, the breeder group is only able to meet rabbit meat needs by 50% of the total demand of 100 kg per week.

In the commodity of rabbits for broiler purposes, supply chain players at the level of traders are divided into several levels namely wholesaler at subdistrict level, wholesaler at regency level and culinary traders based on rabbit meat. Wholesaler at subdistrict level usually will go around to breeders' cages which the location is scattered to look for rabbits that have been rejected, but now because telecommunication facilities are advancing, farmers/breeders often contact wholesaler if they have rejected rabbits and wholesaler will take livestock to cages.

The pricing system for rejected livestock is usually based on the estimated system. Wholesaler will see the condition of livestock before determining the purchase price. When the research took place, the average price of rejected rabbit at the breeder level was IDR 50,000 - 70,000/head, depending on the condition of the livestock with the minimum weight requested by the trader is 2 kg of live rabbits.

The rejected rabbits from wholesaler at subdistrict level will then be sold to wholesaler at regency level in Batu City. The cutting of rabbit's livestock is carried out at this stage. After cutting, rabbit meat will be handled according to consumer needs. Some are sold in filet form and some are in the form of carcasses. Furthermore, rabbit meat will be packed into clear plastic and packaged per 1 kg of meat.

Due to the limited supply of rabbit meat in Batu City, then wholesaler at regency level often have to cooperate with wholesaler from other districts/regency or regions such as Malang, Blitar, Tulungagung, Jember, Kediri and Banyuwangi. This is to ensure that the demand for rabbit meat in Batu City can be fulfilled.

The final point of marketing rabbit meat is on culinary traders based on rabbit meat, where rabbit satay is a typical culinary in this region. Generally processed from rabbit satay are found in this city ranging from roadside food stalls to food stalls or restaurants. . The demand for rabbit meat in the city follows the rhythm of tourist visits, this is due to the less interest in consumption of rabbit meat from Batu City residents. Most consumers of rabbit satay are tourists visiting Batu City. During the research, the price of one portion of rabbit satay at the trader level was Rp. 22,000 / 10 sticks. According to information from traders, the trend of increasing rabbit meat consumption continues to increase every year, even during the holiday season traders are overwhelmed in meeting consumer demand. Based on interviews with one culinary trader, the demand for rabbit meat during holidays and the big days can reach 5 times the demand on regular days.

Beside consumed as satay, rabbit meat is also processed into several other processed forms, namely rabbit meatballs, shredded meat, nuggets and sosis. However, these processed forms have not been very popular and are only limited when there are exhibitions. So it needs continuous efforts to introduce rabbit products to the public, especially the people of Batu City.

The results of the study in the field show that the flow of rabbit meat commodity products of Batu City from producers to end consumers is shown in Figure 1. According to Janvier (2012) the integration of relationships among the parts in supply chain management has a role in the value of transporting goods, where relationships that do not work well can disrupt the overall effectiveness of the supply chain. The application of supply chain management requires livestock industry players to meet customer satisfaction, develop timely products, low cost of procurement and product delivery, as well as careful and flexible industrial management (ilham & saptana, 2017).

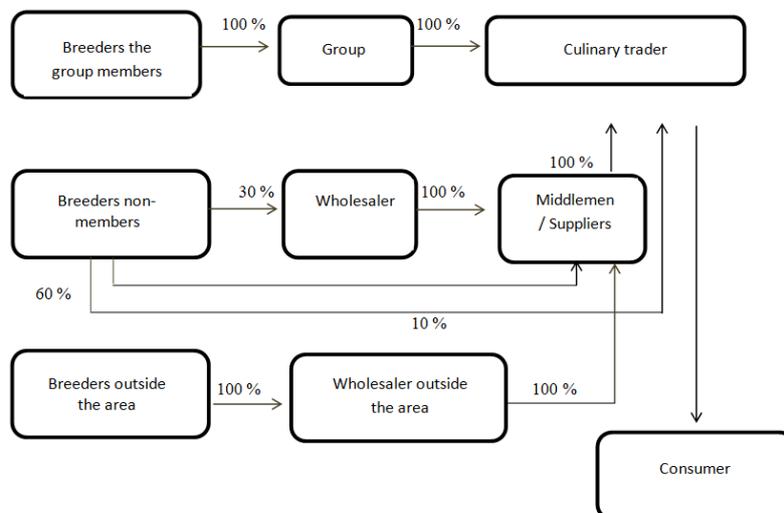


Figure 1 – The flow of commodity products of rabbit livestock for broilers in Batu City

In the existing supply chain institutions in research locations, it shows that breeders play a role as producers which responsible for the rabbit production process. For farmers/breeders who are members of a group, then 100% of their livestock are sold to

group. Whereas for non-member farmers in Batu City, sell the rejected livestock for broiler purposes by 30% to wholesaler at subdistrict level, 50 % to wholesaler at regency level and the remaining 20% to be sold directly to culinary traders. The difference in the purpose of this sale is more due to the mutual relationship that is woven by breeder with each trader.

Wholesaler at subdistrict level, play a role in collecting rejected rabbits from the location of scattered breeders' cages and the numbers tend to be small. Rabbits livestock from wholesaler will be sold 100% to wholesaler at regency level. Wholesaler at regency level play a role in livestock purchasing activities, rabbit livestock cutting and handling until rabbit meat is ready to be marketed to culinary traders. Wholesaler at regency level will sell 100% rabbit meat to culinary traders, while for the by-products such as feathers, will be collected by wholesaler at regency level which will be sold at a price of Rp. 2,000 - Rp. 10,000 per piece according to the condition of the feathers.

The rules of the game that apply in the supply chain institution of rabbit meat commodity in Batu City are general trading patterns. General trading patterns grow naturally in accordance with the development and needs of the actors. All farmer/breeder respondents stated that they were not tied to any trader in selling rejected livestock, so the prevailing rules were general trading patterns in accordance with the market mechanism. Breeders tend to sell relatively limited amounts of rejected livestock to the destinations they want, this is usually based on a relationship of mutual recognition and often the transactions are carried out in the breeder's cage so that the breeder does not need transportation costs for his livestock.

Wholesaler are generally a breeder, wholesaler at subdistrict level collectors are cooperating with breeders and wholesaler at regency level. In the research location, only a small number of wholesalers of rejected livestock can be found for broiler purposes, most rabbit wholesaler in this region are as rabbit wholesaler for decorative/ornamental purposes. The institutional pattern built by all actors in the supply chain is based on mutual trust and personal interaction; there is no written agreement between the parties included in the supply chain. Nowadays, with the development of technology, interactions began a lot of to be done with the pattern of business contact interactions through mobile phones regarding the demand and availability of rabbit meat.

CONCLUSION

Based on the research findings, it can be concluded that the supply chain of rabbit meat commodities in Batu City consists of breeders as producers, breeders group, wholesaler at subdistrict level, wholesaler at regency level, as well as culinary traders based on rabbit meat. Breeders act as rabbit producers who are responsible for rabbit cultivation. Wholesaler at subdistrict level acting as collectors and buyers of rabbit livestock from breeders whose locations are scattered. Wholesaler at regency level play a role in purchasing livestock, cutting, packaging and storing rabbit meat before being sold to culinary traders. The strategic role is owned by Wholesaler at regency level because they have access to breeders and Wholesaler inside and outside Batu city and have access to market destinations. By implementing supply chain management in an integrated manner, it is expected that consumers will obtain better quality products and services as well as affordable prices. Government policy in developing Rabbit agribusiness in this area is still considered to be partial and lacking so that further efforts are needed to increase the interest of breeders in cultivating rabbits for broiler purposes.

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**THE EFFECT OF INDEPENDENCE, EXPERIENCE, AND GENDER
ON AUDITORS ABILITY TO DETECT FRAUD BY PROFESSIONAL SKEPTICISM
AS A MODERATION VARIABLE**

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ABSTRACT

This study aimed to empirically examine the effect of independence, experience, and gender on the auditor's ability to detect fraud by professional skepticism as a moderating variable. It used 84 respondents, they were BPK RI auditor Representative of East Java Province. The analytical method used Moderated Regression Analysis (MRA) with SPSS 20.00 for Windows. The results of the study indicated that independence and experience had a significant positive effect on the auditor's ability to detect fraud. While gender had a positive but not significant effect on the auditor's ability to detect fraud. In addition, the results of this study also showed that professional skepticism was able to moderate the relationship between independence, experience, and gender to the auditor's ability to detect fraud.

KEY WORDS

Independence, experience, gender, professional skepticism, auditor, detecting fraud.

Fraud which was occurring in the private sector and government is one of the crimes that harm to society. The act of cheating seems to be considered as a common thing in various countries, both developed and developing countries, including Indonesia. There have been frequent reports lately both on television and in the mass media regarding acts of fraud which have resulted in the detention of several government officials in Indonesia. This illustrates that fraud in Indonesia, especially in the government sector is very alarming and must be dealt with seriously. The government sector is required to maintain quality, professionalism, and accountability in carrying out its activities, so that fraud and misuse in the management of state finances do not occur (Subsiyani, 2017). This indicates that an audit is required by an independent third party to assess the fairness of the financial statements prepared by government institutions.

The Republic of Indonesia Supreme Audit Agency (BPK RI) as a government external auditor is an independent financial audit body that conducts checks on the management and accountability of state finances. The external auditor must ensure that the financial statements prepared are in accordance with applicable standards and reflect the actual conditions of the work unit. In addition, external auditors must also ensure that the report does not contain material misstatements, whether caused by fraud or fraud. In carrying out its audit tasks, the BPK has a benchmark in conducting checks on management and responsibility of state finances, namely the State Financial Inspection Standards (SPKN). Examination of management and responsibility of state finance is carried out to create a clean and free government from corruption, collusion and nepotism (BPK RI, 2017).

The results of the ACFE Indonesia Chapter survey conducted in 2016 showed that external auditors ranked second out of twelve as those who detected fraud with a percentage of 16.5%. This is interesting, because the survey conducted in 2014 showed that external auditors were ranked seventh out of twelve with a percentage of only 3%. There are several previous studies regarding the auditor's ability to detect fraud. Idawati & Gunawan (2015) found that independence was influential in efforts to detect fraud. In addition to independence, professional skepticism and competence also affect the auditor's ability to detect fraud (Hartan, 2016).

However, Nadhira (2018) found that independence did not affect fraud detection capabilities. He stated that the more independent the auditor, the auditor will tend to

complete his task independently without seeking more information about the evidence that supports the management assertion of his client. A high audit experience from an auditor also does not affect the increase in fraud detection capabilities (Diana, 2016).

In addition, Yendrawati & Mukti (2017) also found that gender had no effect on efforts to detect fraud. He stated that men and women have the same ability to analyze information obtained during the inspection process. The skepticism that the auditor has when conducting an examination also does not affect the auditor's ability to detect fraud (Suryanto et al., 2016). Cory (2015) found that auditor professional skepticism was able to strengthen the auditor's experience relationship with fraud detection. Whereas Bangun (2017) actually found that professional skepticism did not affect the relationship between independence and gender towards the ability to detect fraud.

Attribution theory studies the process of how someone interprets an event, reason, or cause of behavior. Attribution Theory was developed by Heider (1958) which states that a person's behavior is determined by two factors, namely internal factors and external factors. The internal factor in question is a factor that comes from within a person such as the ability or effort made by someone. While what is meant by external factors are factors that come from outside a person. Kelley (1973) mentions that attribution theory can answer questions about social perception as well as self-perception. When an auditor faces a red flag when conducting an audit, the auditor will try to find the cause and make conclusions about the red flags. An auditor's self-perception will play an important role in concluding whether red flags lead to symptoms of cheating or not. Behavior and Behavior Theory was developed by Triandis (1971) which states that behavior is determined by attitude, guidance on what is done, and what is usually done will determine the formation of a behavior. According to Fishbein & Azen (1975) in Mentari (2018) something can be said as an attitude when fulfilling the following things: (1) attitudes can be learned, (2) attitudes defining responses and behavior of people towards what is being experienced, (3) attitude is governed by the core of personality. Behavior and behavior theory explains how the attitudes and guidelines used by the auditor will determine their behavior.

Fraud is an unlawful act carried out by people both inside and outside the organization, with the intention of gaining personal or group benefits that can directly harm others (Priantara, 2013: 4). However, there are several elements of fraud formation. These elements are:

1. There are false or misleading statements which can be in the form of a report, data or information, or proof of transaction;
2. There is abuse or utilization of position, occupation, and position for personal or group interests and benefits;
3. Supported by material facts, meaning that they must be supported by objective evidence and in accordance with the law;
4. The aggrieved party relies and is deceived by a statement made wrong that is harmful. That is, there are parties who suffer losses, and there are also those who obtain illegal profits or benefits in the form of money or assets or other economic benefits.

The ability to detect fraud is something that must be owned by the auditor because it shows the extent of the quality of the audit performed (Kartikarini, 2016). According to Tuanakotta (2010) detecting fraud is an attempt to get sufficient initial indications of fraud, while at the same time narrowing down the space for fraud perpetrators. Mui (2010) in Pramana (2016) states that fraud detection is an unstructured task that requires the examiner to produce alternative methods as well as to seek additional information from various sources encountered during the examination. In an effort to detect fraud, most of the evidence of fraud obtained is indirect evidence.

The examiner must be responsible for continuously maintaining independence in independence of mind and independence in appearance (independence of mindfulness) (Arens et al., 2014: 102). In conducting audits, the examiner needs to consider three types of disruptions to independence, namely personal, external and / or organizational disturbances. If one or more of the interruption of independence affects the ability of the individual examiner to carry out his inspection duties, the examiner is required to reject the audit

assignment (SPKN, 2017). The interests of users of financial statements may be different from one another. Therefore, independence is a mandatory thing that must be understood and owned by an auditor in carrying out his duties.

The auditor's experience is a measure of the length of time and duration of work that the auditor has passed in understanding his duties properly. Experience is a good way of learning for auditors because with high experience it will make auditors rich in audit techniques (Biksa & Wiratmaja, 2016). In general, audit experience is indicated by the auditor's flight hours in carrying out inspection tasks. Auditors who have high experience will understand more about the causes of fraud (Armanda, 2014). With a lot of experience, the auditor will not only be able to detect fraud, but the auditor is also able to provide a more accurate explanation of the findings (Suryanto et al., 2017). Experienced auditors will have more knowledge about mistakes and fraud so that they will produce better performance in detecting fraud cases compared to minimal experienced auditors (Pramana, 2016).

Hardies et al. (2011) in Kartikarini (2016) relates gender with behavior carried out by someone. In some studies, gender is related to male and female gender, but in other literature, gender is related to both masculine and feminine characteristics. Femininity and masculinity refer to things that determine the behavior of someone. Women tend to have feminine characteristics, while men tend to be masculine (Burke, 2000 in Kartikarini, 2016). Compared to men, women often behave more easily in believing in something. In doing a job, women tend to do things more thoroughly than men. Men tend to minimize cognitive effort in receiving information from clients. These things will make the attitude of professional skepticism vary in evaluating the quality and quantity of evidence used to support the audit report (Wake, 2017).

One of the most important attitudes that must be had when the examiner does his job is professional skepticism. The examiner must plan, carry out, and report on the examination with a professional attitude of skepticism. Hurt (2010) in Pramana (2016) states that professional skepticism itself does not have a definite definition, but from the definition of the word skepticism and professionalism it can be concluded that auditor professional skepticism is an attitude that always doubts and questions everything and critically assesses audit evidence. Skepticism does not mean unbelief, but seeks proof before believing a statement.

This study aimed to empirically examine the effect of independence, experience, and gender on the auditor's ability to detect fraud by professional skepticism as a moderating variable.

HYPOTHESIS DEVELOPMENT

Attribution Theory was developed by Heider (1958) which states that a person's behavior is determined by two factors, namely internal factors and external factors. The internal factor in question is a factor that comes from within a person such as the ability or effort made by someone. In addition, the Attitude and Behavior Theory developed by Triandis (1971) shows that the need for attitudes and guidelines used by auditors in order to determine their behavior in detecting fraud, one of which is having an independent attitude and experience in the audit field.

Based on the results of empirical tests conducted by several previous researchers, the formulation of the hypothesis of this study was:

- H1: Auditor independence had a positive effect on the ability to detect fraud;
- H2: Auditor experience had a positive effect on Ability to Detect Fraud;
- H3: Gender influenced the ability to detect fraud;
- H4: Professional skepticism moderated the relationship between Auditor Independence and Ability to Detect Fraud;
- H5: Professional skepticism moderated the relationship between Auditor Experience and Ability to Detect Fraud;
- H6: Professional skepticism moderated the relationship between Gender and Ability to Detect Fraud.

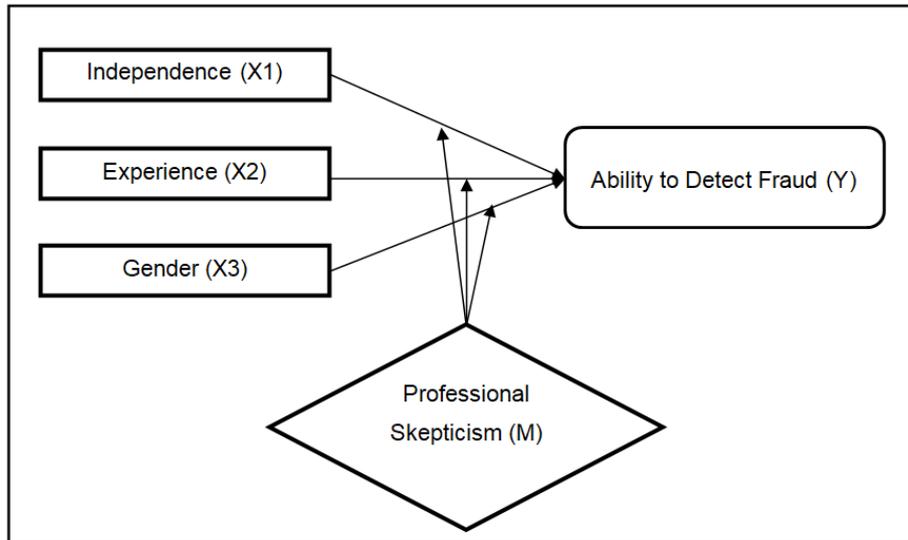


Figure 1 – Conceptual Framework

METHODS OF RESEARCH

The population of this study was all auditors working at the Republic of Indonesia BPK Representative Office in East Java. This study uses a portion of the population to be used as the research sample. The sampling technique using convenience sampling is used because the researcher cannot obtain complete auditor identity information. The data collection method used in this study is the survey method, which is the method of collecting primary data by retrieving data from the existing population. The analytical method used is the Moderated Regression Analysis (MRA) using SPSS 20.00 for Windows.

RESULTS AND DISCUSSION

In this section we will present the results of the test of the effect of Independence, Experience, and Gender on the Ability of Auditors to Detect Fraud with Professional Skepticism as a moderating variable using the statistical method Moderated Regression Analysis (MRA). The moderation regression analysis equation model was divided into 2, as follows:

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

$$Y = a + \beta_4 X_1 + \beta_5 X_2 + \beta_6 X_3 + \beta_7 M + \beta_8 X_1 * M + \beta_9 X_2 * M + \beta_{10} X_3 * M + e$$

Before testing the moderation regression analysis, the classic assumption test must first be carried out as a condition for the feasibility of the data for subsequent regression analysis.

The results of the normality test calculating from the first equation obtained using SPSS are as follows:

Table 1 – One-Sample Kolmogorov-Smirnov Test

n/n	Unstandardized Residual
N	84
Test Statistic	0.061
Sig.	0.200

Based on table 1 above, the significance value of the test was 0.200, which meant that the alpha value was greater (0.05). Based on these tests indicate that the residual distribution is normally distributed.

To find out whether or not multicollinearity can be seen using the value of Variance Inflation Factor (VIF). If the VIF value was greater than 10, it indicates multicollinearity.

Table 2 – Multicollinearity Test

Variable	Tolerance	VIF
X1 (Independence)	0.965	1.036
X2 (Experience)	0.952	1.051
X3 (Gender)	0.977	1.024

Based on table 2 above, it could be seen that the VIF values of the three independent variables are smaller than 10, so it can be concluded that there is no multicollinearity between independent variables.

The results for the normality test of equation 2 were as follows:

Table 3 – One-Sample Kolmogorov-Smirnov test

n/n	Unstandardized Residual
N	84
Test Statistic	0.061
Sig.	0.200

Table 3 above shows the significance value of the Kolmogorov-Smirnov one sample test worth 0.200, which means that the alpha value is greater than (0.05). Based on these tests indicate that the residual distribution is normally distributed.

The results for the multicollinearity test for equation 2 were as follows:

Table 4 – Multicollinearity Test

Variable	Tolerance	VIF
X1 (Independence)	0.004	228.447
X2 (Experience)	0.005	196.792
X3 (Gender)	0.003	312.073
M (Professional Skepticism)	0.005	214.111
X1.M	0.002	662.253
X2.M	0.002	573.667
X3.M	0.003	323.051

Table 4 shows that each independent variable has a VIF value of no more than 10. This indicates that the assumption of multicollinearity tests has been fulfilled.

Regression analysis is used to obtain variables that affect the ability of the auditor to detect fraud, and to know the most dominant variables that affect the ability of the auditor to detect fraud. Based on the results of data processing obtained results as listed in table 5.

Table 5 – Regression Analysis Test Equation 1

Variable	B	T _{count}	Sig.
Constanta	17.572	-	
X1 (Independence)	0.286	2.794	0.007
X2 (Experience)	0.411	4.125	0.000
X3 (Gender)	0.268	1.463	1.047

Explanation of regression models obtained based on table 5 above is as follows:

$$Y = 17,572 + 0.286 X1 + 0.411 X2 + 0.268 X3 + e$$

The first hypothesis stated that independence has a positive effect on the auditor's ability to detect fraud. The regression results in table 1.5 show that the regression coefficient of the independence variable (X1) is 0.286. This shows that independence has a positive effect on the auditor's ability to detect fraud. In addition, the table above also shows the value

of the t count of the independence variable (X1) greater than t table ($2.794 > 1.990$) or from a significance value smaller than alpha value ($0.007 < 0.050$) which means statistically significant. Then it can be concluded that H1 is accepted because independence has a positive effect on the auditor's ability to detect fraud.

The second hypothesis stated that experience had a positive effect on the auditor's ability to detect fraud. The regression results in table 1.5 show that the experience variable regression coefficient (X2) is 0.411. The coefficient shows a number that is positive which means that experience has a positive influence on the auditor's ability to detect fraud. Experience variables have a tcount greater than t table ($4.125 > 1.990$) and a significance value smaller than alpha value (0.05), which is equal to 0.000. This statistically shows that experience variables have a significant influence on the auditor's ability to detect fraud. Based on this, it can be stated that H2 is accepted.

The third hypothesis stated that gender influences the auditor's ability to detect fraud. The regression results in table 1.5 show that the regression coefficient of the gender variable (X3) is 0.268. This showed that independence has a positive effect on the auditor's ability to detect fraud. In addition, the table above also showed that the gender variable has a tcount smaller than t table ($1.463 < 1.990$) and a significance value greater than the alpha value (0.05), which was equal to 1.047. This shows that gender has a positive but not significant influence on the auditor's ability to detect fraud. So it can be concluded that H3 is accepted.

Moderation regression analysis explains the effect of independent variables and interactions between independent variables and moderating variables on the dependent variable. The results of the regression analysis of data processing are shown in table 6.

Table 6 – Regression Analysis Test Equation 2

Variable	B	T _{count}	Sig.
Constanta	26.806	-	
X1 (Independence)	2.043	2.384	0.017
X2 (Experience)	1.569	4.184	0.042
X3 (Gender)	7.739	1.426	0.158
M (Professional Skepticism)	2.206	3.145	0.028
X1.M	-	2.271	0.028
X2.M	4.076	1.441	0.014
X3.M	1.276	1.353	0.180

Based on table 6 above, the regression models obtained are:

$$Y = 26,806 + 2,043 X1 + 1,569 X2 + 7,739 X3 + 2,206 M + 2,073 X1 * M + 4,076 X2 * M + 1,276 X3 * M + e$$

Based on the results of the regression analysis obtained above, it could be seen that all independent variables, namely independence, experience, and gender have a positive effect on the auditor's ability to detect fraud as the dependent variable. While for significance, the independence and experience variables have a significant effect on the auditor's ability to detect fraud. However, gender variables have a non-significant effect on the auditor's ability to detect fraud.

The fourth hypothesis in this study was that professional skepticism moderates the relationship between auditor independence and the auditor's ability to detect fraud. Table 1.6 shows that the interaction between the variables of independence (X1) and professional skepticism (M) on the variable ability of auditors to detect fraud (Y) has a regression coefficient of 2.073 which means having a positive relationship. Then, the resulting tcount was also greater than the value of t table ($2,271 < 1,992$) and the significance value is smaller than the alpha value ($0.028 < 0.05$). Based on the results of the data processing, it could be seen that H4 is accepted.

The fifth hypothesis stated that professional skepticism moderates the relationship between auditor experiences with the auditor's ability to detect fraud. The results of data processing show that the interaction between experience variables (X2) and professional skepticism (M) on the auditor's ability to detect fraud (Y) had a regression coefficient of 4,076

which means having a positive relationship. The significance value produced is equal to 0.014 which meant it was smaller than the alpha value (0.05). This shows that if there is an increase in interaction between experience variables (X2) and professional skepticism, it will increase the auditor's ability to detect fraud (Y). So, it can be concluded that H5 was accepted.

The sixth hypothesis as well as the final hypothesis in this study was that professional skepticism moderates the relationship between gender and the auditor's ability to detect fraud. Table 1.6 shows that the interaction between gender variables (X3) and professional skepticism (M) on the auditor's ability to detect fraud (Y) has a regression coefficient of 1,276 which meant has a positive relationship. In addition, table 1.6 also showed a significance value of 0.180 which means it was not significant because it was greater than the alpha value (0.05). The regression coefficient that produces a positive value explains that if there is an increase in the interaction of gender variables (X3) with professional skepticism (M) it will increase the auditor's ability to detect fraud (Y), but not significantly because the significance value is greater than alpha. So, it can be stated that H6 is accepted.

DISCUSSION OF RESULTS

The results of testing the first hypothesis indicated that auditor independence has a positive effect on the auditor's ability to detect fraud. This showed that the more independent an auditor was, the auditor's ability to detect fraud will also increase. However, the results of this study are not in line with the results of Nadhira's research (2018) which showed that auditor independence has a negative effect on the auditor's ability to detect fraud. The results of this study were supported by the research of Pramudyastuti (2014) and Pramana (2016) which shows that independence has a positive and significant effect on the auditor's ability to detect fraud. So, it can be concluded that an auditor who always adheres to an independent attitude, the auditor will be better able to detect fraud, because the auditor will not side with any party if he finds a fraud during the inspection process.

The results of this study which showed that the auditor's experience has a positive effect on the auditor's ability to detect fraud indicate that the more auditor experience in conducting audits, the auditor's ability to detect fraud will also increase. The results of this study were supported by the results of research by Armanda & Ubaidillah (2014) and Suryanto et al. (2017) which also shows that the auditor's experience has a significant positive effect on fraud detection capabilities. Research conducted by Kuria & Muturi (2015) on external auditors in Kenya also shows that experience has a positive effect on the auditor's ability to detect fraud. Auditors with extensive experience in implementing audit procedures are not only able to determine the fairness of a financial statement, but the auditor will also be better able to find indications of fraud. So, it can be concluded that the more hours the auditor flies in auditing, the auditor's ability to detect fraud will also increase because the auditor's ability is increasingly honed.

The results of testing the third hypothesis indicated that gender has a positive effect on the auditor's ability to detect fraud, but did not significantly influence. According to Kushasyandita (2012) in Cory (2015) states that female auditors will be more thorough in investigating audit evidence and not easily trusting clients. In addition, he also stated that women tend to see clients from the emotional side, including body language and client non-verbal cues. The results of this study are supported by the results of a study by Kartikarini (2016) which shows that gender has a positive effect on the ability to detect fraud. He stated that the feminine attitude that is usually owned by women would make a person more flexible in placing behavior in different social situations, so that they would be better at understanding the signs of cheating.

The results of testing the fourth hypothesis indicated that the regression coefficient is positive. This explains if there is an increased interaction between independence and professional skepticism, it will increase the auditor's ability to detect fraud. The results of this study were in line with the results of research conducted by Biksa & Wiratmaja (2016), Pramana (2016) who also tested the effect of professional skepticism on the ability to detect

fraud. Fullerton & Durtschi (2004) in Yatuhudika (2016) states that auditors with high skepticism will improve their ability to detect fraud by developing searches for additional information when faced with symptoms of fraud. So, it can be concluded that if an auditor did not believe in management assertions and does not favor anyone, then an auditor will be better able to detect fraud.

The results of testing the fifth hypothesis showed that skepticism strengthens the relationship between experience with the auditor's ability to detect fraud. The results of this study are supported by the results of the Parastika & Wirawati (2017) study which also shows that professional skepticism is proven to strengthen the influence of auditor experience on the ability to detect fraud. In addition, he also stated that experience can affect the auditor's predictive ability and detection of fraud. Winantyadi and Waluyo (2014) state that the more auditors conduct audit of financial statements, the higher the level of skepticism. So, it can be concluded that if an auditor has a high level of skepticism, it will strengthen the influence of the auditor's experience on the ability to detect fraud.

The results of this study indicated that the interaction between gender variables and professional skepticism towards the auditor's ability to detect fraud had a positive, but not significant, relationship. This was in line with the results of Cory's research (2015) which states that gender has a positive effect on the ability to detect auditors. Yuniarti's (2018) study which also uses professional skepticism as a moderating variable also showed that skepticism was able to strengthen the relationship between gender and the auditor's ability to detect fraud. He also stated that many auditor capabilities are determined by internal attribution. One decisive internal attribution was the gender and professional skepticism that the auditor has. With the attitude of professional skepticism in the auditor will facilitate the auditor in analyzing the presence or absence of fraud in the financial statements so that the auditor will increase the detection of fraud in the subsequent inspection process (Hartan, 2016).

CONCLUSION AND SUGGESTIONS

This study examined the effect of independence, experience, and gender on the ability of auditors to detect fraud by professional skepticism as a moderating variable. Based on the results of the study it could be concluded that auditor independence and experience had a significant positive effect on the auditor's ability to detect fraud, while gender had a positive but not significant effect on the auditor's ability to detect fraud. In addition, based on the results of the study it can also be concluded that professional skepticism was able to moderate the relationship between independence, experience, and gender to the auditor's ability to detect fraud. In the process of conducting research, researchers faced several limitations when was conducting research. The first limitation was that the results of this study cannot be generalized because this study used convenience sampling techniques. This study was not able to use random sampling techniques because researchers have difficulty getting a complete list of auditors. Then, the return rate of the questionnaire was not 100% because when the researcher conducted the research, some auditors had not returned from the inspection assignment in the regional government. For further researchers, it was recommended to distribute questionnaires when the auditor had returned from the inspection assignment in the regional government so that the return of the questionnaire can be maximized. In addition, further researchers can also enhanced external factors that might have an influence on the auditor's ability to detect fraud.

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A STUDY OF CORAL REEF CONDITION AND CORAL REEF FISH BIODIVERSITY IN THE WATERS OF LEMBEH STRAIT

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ABSTRACT

Lembeh Strait marine tourism area in Bitung City of North Sulawesi province has many diving spots because of its specific and unique coral reef. However, it is very seriously threatened by degradation, so it needs a study to monitor the level of damage so that the recovery process can be obtained. This study aimed at determining the distribution of the percentage of the condition of coral reefs and fish biodiversity throughout the Lembeh Strait. This research was carried out in the northern waters of the Lembeh Strait: Mawali waters, Serena Island waters, Tandurusa waters, and Makawidey waters (3-5 m depth). Data were collected by diving using the Underwater Photo Transect (UPT) and Underwater Visual Census (UVS) methods in the transect area of 350 m². The results of the study showed that the condition of coral in the Lembeh Strait had seriously degraded with a mean health level of 23.07% and a damage rate of 76.3%. Generally, the coral reef biodiversity is still relatively low but still warn to be vigilant. The environmental factors still support the survival of coral reefs.

KEY WORDS

Coral reef, biodiversity, underwater photo transect, underwater visual census, Lembeh Strait.

One of the areas that became a marine tourism destination in eastern Indonesia is the Lembe Strait in Bitung, North Sulawesi. There are many diving spots there because Bitung has a specific and unique coral reef ecosystem. The seabed is dominated by black-gray volcanic sand deposits. The most seabed is a gentle slope, so it is rarely found coral reef there. The clearness of the water will make it easy to see the bottom of the waters.

The strategic issues raised as a problem are as follows (Setiawan, 2016):

- The threat of climate change is getting stronger, but the marine and fisheries management system still runs as usual so that it has an impact on reducing attention to the management of coral reef ecosystems;
- Coral reef resources have seriously experienced degradation. The current condition of coral reefs in Indonesia, categorized as good to excellent, is estimated by 29% (Repie E, 2006, Suharsono et al. 1997). In fact, the condition of coral reefs in North Sulawesi, classified as good to excellent, is only 2% (JICA, 2002), so there should be adequate recovery measures;
- The live coral cover shows the medium category (25-49.9%).

The objectives of this study were to be able to:

- Find out the types of coral reefs and fish biodiversity spread on the Lembe Strait at the depth of 3-5 meters;
- Produce a distribution of the percentage of the health and damage of the coral reefs in Lembe Strait at the depth of 3-5 meters.

MATERIALS AND METHODS OF RESEARCH

This research was conducted during July-September 2017 in the northern Lembe Strait: Mawali, Tadurusa, and Makawidey waters and Serena Island in Bitung City (figure 1) with a maximum depth of 3 to 5 meters.

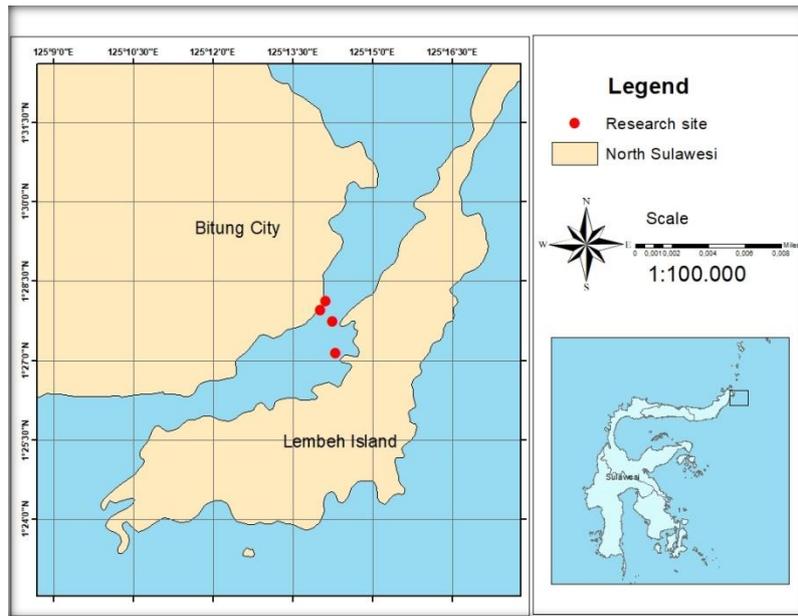


Figure 1 – Research Site

The main equipment used to support this research was: 3 units of scuba diving equipment, underwater digital camera and Pelang digital camera, Roubert boat, reef fish identification book, oxygen measuring device, salinity, brightness, and current speed.

Data were collected by diving using SCUBA equipment, UVC Method, and underwater shooting at 9 to 13 from July to September 2017. The transect line length at each station is 100 m. An observation and data collection was done as the patterns simulated in the figure 2.

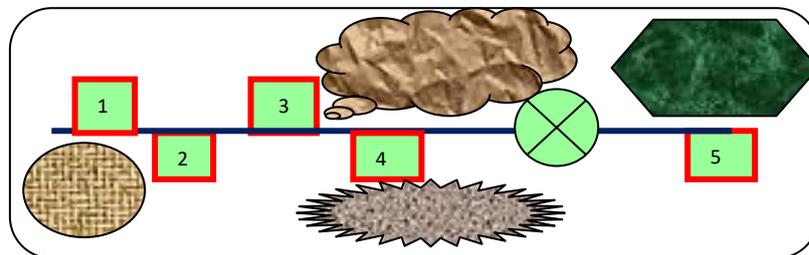


Figure 2 – Patterns simulation of data collection and coral shooting

Coral cover data taken by the UVC method was equipped with underwater photos along the interval of 1 meter to observe and record coral reef condition. One day, it takes more than one station consisting of 3 small stations with the output:

$$\text{percentage of category cover} = \frac{(\text{the number of category points})}{(\text{the number initial points})} \times 100\%$$

The UVC method developed by English et al., (1997) is a fast, accurate, effective, and environmentally-friendly method. The results are generally relevant to the objectives of coral reef fisheries management. The most dominant coral reef fish are diurnal (active during the day) and only a small proportion are nocturnal (nighttime active) so the ideal visual census time approach is from 9:00 am to 4:00 pm.

The time approach pays attention to tidal conditions because low tide often causes high currents. The ideal time is when water starts to rise where fish come out looking for food. The fish association structures in the research area will be observed using UVC

technique by one or two SCUBA divers. To observe this association, it used reef and coral fish monitoring guides issued by the 2014 Cormep-CTI LIPI.

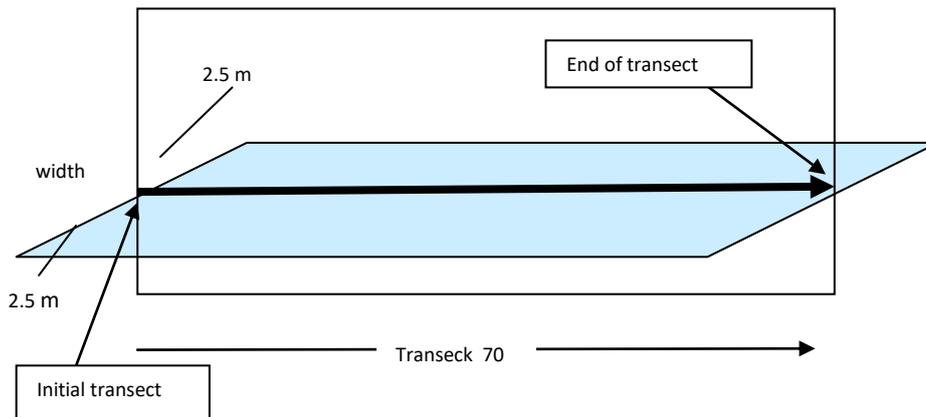


Figure 3 – Quadrant sketch for shooting reef fish

RESULTS AND DISCUSSION

The general observations carried out at 4 sites with a depth of 3-7 meters showed that the average percentage of coral cover conditions was: dead coral cover of 57-83%, damaged coral cover (light and heavy) of 6-14%, good coral cover of 2-8%, and excellent coral cover of 14-27.5%. This condition is illustrated in diagram 2.

Comparison Of Coral Reef Cover At 4 Sites

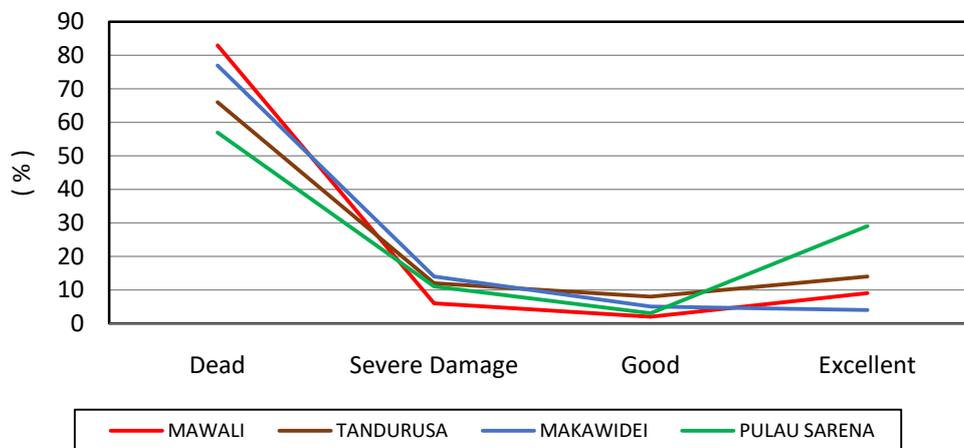


Figure 4 – Comparison of coral cover in 4 research locations

This coral cover condition, if referred to criteria (1979 UPMSC, in (Papu, 2011) are already in a very alarming condition because of the damage rate severe.

Separately, the results of the observations in every site (see figure 4) show that live coral cover in the Mawali waters, precisely on the northern side of Lembe Island, is only around 14.6% and the rest is damaged and dead coral by 84.4%. The most dominant type is *Acropora Sp.* while the bottom topography of the waters is filled with debris from coral and sand. This condition triggers *Acropora* to grow. This area is a passenger line and the means of access to small fishing boats. Also, there are several ship docking industries.

The results of the observations in the Tandurusa waters (see Figure 5) showed little difference where live coral cover is around 26.1% and the dead and damaged are 73.9%. The most dominant type is *Acropora Sp.* The topography of the bottom of the waters is filled with debris from coral and sand. This condition causes *Acropora* to live. This area is right in

front of the settlement which is a passenger line and the mean of access to the boats/small fishing boats. This area also has a Navigation port and several ship docking industries.

The results of the observations in the Makawidei waters that face the northern part of the Lembe Strait showed that the live coral cover is only 14.3% and the rest is the dead and damaged coral by 85.7%. The coral colonies that dominate are *Acaropora .cervicornis* with topographical conditions on the bottom of the water filled with debris from fragments of coral and sand. This area is right in front of the settlement which is a passenger line and the mean of access to the boats/small fishing boats. This area is also the place for the withdrawal of the dampar Beach seine.

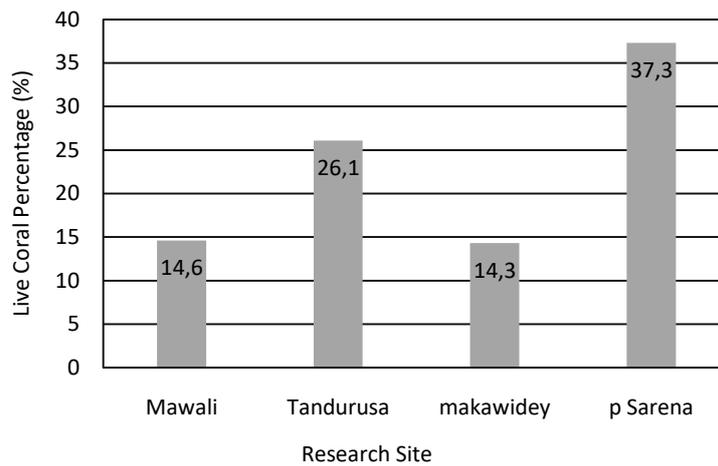


Figure 5 – Comparison of the percentage of live coral cover in 4 sites

The observation result in Serena island is still relatively better than the other locations. Serena island is located between the mainland of Sulawesi Island and Lembe Island consisting of three small islands. In this area, the live coral cover is 37.3% and the dead and damaged coral cover is 62.7%. The coral colonies that dominate in this water area are *Acaropora cervicornis*. (80%). Meanwhile, the topography of the bottom of the waters is filled with debris from coral and sand.

Visually, the condition of this region is illustrated in the following figure 6.

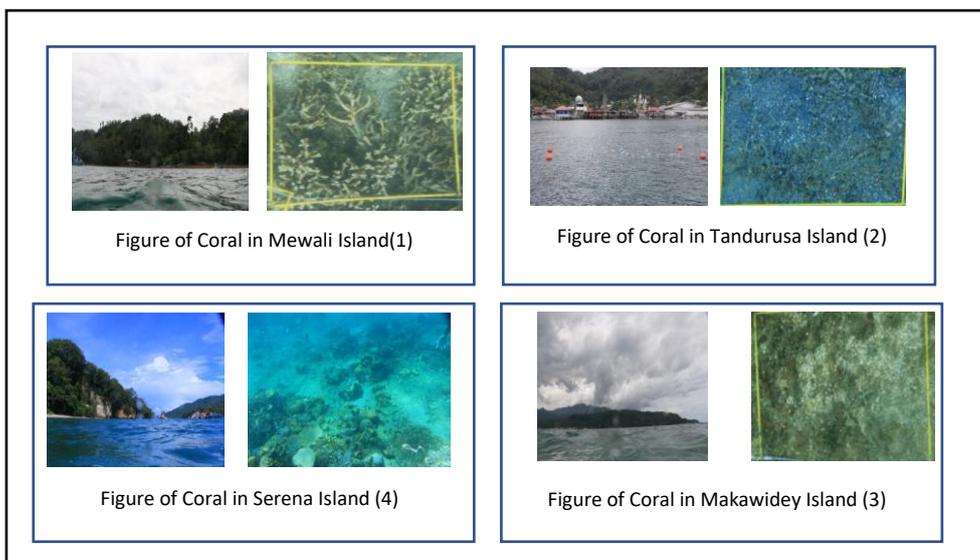


Figure 6 – Visualization of 4 Research Sites

The observation in the Mawali waters in a quadrant of 350 M² or 70m x 5 m area consisted of 6 species is the second largest amount of abundance with an average of 422 fish. *Myripritis prolina* is the most dominant type by 49.29%, followed by sergeant major (*Abudefduf saxatilis*) of 25.59%, and *Amphirion percula* of 14.45%.

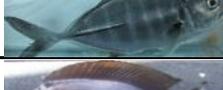
In the waters around the Tandurusa village, there are only 5 species with an average abundance of 261 fish. Besides, the major sergeant is the most dominant species by an average of 119 or 45.59%.

The total number of fish in the waters around the Makawidei village was about 166 fish consisting of 5 species; the most dominant species is *Myripritis prolina* of 30.2%. There is no *caranx sp* found in this area.

In Serena island waters, the highest abundance was 1447 fish. The most dominant species were *Myripritis prolina* of 44.57% and followed by Sergeant Major (*Abudefduf saxatilis*) of 37.46%.

There were only 5-6 species observed in the research sites so it could be assumed that the community structure and the level of diversity were very low. (Setiawan, 2016) through his research in Batuangus waters of Bitung City found that the structure of the fish community consisted of 195 species and the community structure was at a low and moderate level.

Table 1 – The types and percentages of fish abundance in 4 sites

Fish name		The number of individual							
		Mawali		Tandurusa		Makawidey		Serena island	
		Total	(%)	Total	(%)	Total	(%)	Total	(%)
	<i>Clownfish Amphirion percula</i>	61	14.45	39	14.94	15	9.04	194	13.41
	<i>Myripritis prolina</i>	208	49.29	44	16.86	50	30.12	645	44.57
	Sergeant major <i>Abudefduf saxatilis</i>	108	25.59	119	45.59	87	52.41	542	37.46
	Starfish	19	4.50	0	0	5	3.01	65	4.49
	Bobara	3	0.71	8	3.07	0	0	21	1.45
	<i>Bawal hitam or Parastromateus niger</i>	23	5.45	51	19.54	9	5.42	215	14.86
Total		422	-	261	-	166	-	1447	-

The results of the physical and chemical parameters observation show that the condition of the waters is decent for a fish community to grow.

Table 2 – Some oceanographic parameters at the research site

Parameter	Mawali	Tandurusa	Makawidey	Serena
temperature (°C)	27.2 – 28.7,	26.2 – 28.7,	27.2 – 27.7,	27.0 – 28.0
Salinity (‰)	29.0 – 30.5	29.0 – 30.5	29.0 – 31.5	29.5 – 32.5
pH	7.8	7.7	7.5	7.3
current speed(cm/second)	0.0 – 15.4	0.0 – 5.4	0.0 – 45.5	0.0 - 57.0
Brightness (m)	7	7	7	7

The state of the oceanographic parameters (see table 2) shows the following phenomena:

The temperature at the research sites was around 26 - 28⁰C, which was still in the seawater quality standard that helps in the fish growth process. This is because the current speed, both the frequency and the intensity are on a medium scale.

The salinity score ranged from 29.0 - 32.5 means that the salinity of Lembeh strait was still moderate to support the biological survival of fish and coral communities.

pH from those four research sites are: Mawali waters = 7.8; Tandurusa waters = 7.7; Makawidei water = 7.5; Serena island = 7.3. The pH value of the aquatic environment varies, but this pH value is within the standard for safe survival.

The current speed ranging from 5 - 57 cm/sec illustrates that the intensity of the current movement is still on a quiet and medium scale so that it does not affect the coral or fish.

The clearness of the water also affects the presence of biota because the circulation of water follows the tide movements outside the strait. The decrease in water quality occurs during the rainy season because of the large amount of run-off and waste from the land.

The description of the detected oceanographic parameters shows very conducive condition to coral and fish communities to live. However, the real condition of the live coral cover and the fish communities is very alarming. (Setiawan, Tasidjawa, Wantah, Hendri Johanis, & Ratulangi, 2016) proposed that good environmental conditions will have an impact on the survival rates. According to (Thalib A.S , et al 2017), oceanographic parameters, both physical and chemical, show natural and normal conditions in accordance with the sea water standards. This was confirmed by (Patty, 2015) that the levels of phosphate, nitrate, and oxygenator in Lembeh Strait waters are still in normal conditions for the coastal waters and good for the life of marine biota.

For this reason, it is reasonably suspected that external factors such as shipping lanes, anchorage locations of ships, passenger liner, and the building of ship docking facilities on land.

CONCLUSION AND SUGGESTIONS

The condition of the reef in the waters (3-5 m depth) in the Lembeh Strait has experienced relatively serious degradation where the average level of health or life is 23.07%. Separately, good coral health cover is: Serena Island of 37.25%, Tandurusa waters of 26.1%, Mawali waters 14.65%, and Makawidey waters of 14.3%. The number of reef fish is getting lower but is still at the alert level, while the dominating species are the Sergeant Major. The environmental condition still supports the survival of coral reefs.

Suggestions:

- Long-term monitoring needs to do to predict the impact of changes in the structure of reef cover in various conditions;
- The use of fishing gear to increase fisheries resources can damage and disrupt the growth and recovery of reef habitats. Therefore, there should be regulations that regulate it;
- If the city government of Bitung plans to develop integrated fisheries in the Lembeh Strait for the future, it is necessary to make a technical guide that can accommodate all user interests in the reg.

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CONSTITUENT GENETIC CHARACTERISTICS OF SCAD SPECIES (FAMILY CARANGIDAE) FROM BITUNG WATERS OF INDONESIA

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ABSTRACT

The clusters of scad (*Selar*) which caught around Bitung waters so far has not been genetically confirmed, which has led to differences in the Bitung community's assumptions about the constituent species of Mackerel. The first assumption is that Scads in Bitung waters consist of 2 species only and the second assumption states that it consists of 3 species. To answer these problems, it is necessary to study validly the species based on genetic characteristics and nomenclature. There were 4 species of Scad caught in the waters around Bitung, covering *Tude*, *Oci*, *Tude Batu* and *Ekor Kuning Napo* according to the local names. This research aimed to obtain the genetic characteristics of Mackerel scad species and to obtain valid species according to the nomenclature. Data analysis was conducted using morphological and genetic approaches. The results showed the constituent genetic characteristics of the scad captured in the waters around Bitung. Based on DNA-COI analysis and nomenclature results, *Tude* and *Oci* species have 90% similarity with each other and belong to the same species of *Selar crumenophthalmus*, *Tude Batu* is *Selar boops* with 90% similarity and Ekor Kuning Napo is *Selaroides leptolepis* with 98% similarity. From these results, it can be concluded that there are only 3 (three) species of scad seen from the nomenclature, namely *Selar crumenophthalmus*, *Selar boops* and *Selaroides leptolepis*.

KEY WORDS

Constituent species, genetic characteristics, Bitung waters, scad.

Indonesia is a country with the largest number of fish species in the world (Froese & Pauly, 2011; Appeltans, 2012). Some researchers have noted that Indonesia has 8,500 fish species living in the waters, constituting 45% of the total global species in the world (Budiman *et al.*, 2002), and has 2,500 species of marine fish (Sidarto, 1977 in Bailey *et al.*, 1987). According to the Capture Fisheries Statistics of Indonesia issued by the Directorate General of Capture Fisheries (DJPT) of the Ministry of Maritime Affairs and Fisheries on the standard statistical classification of marine fish species, there are 91 names of fish clusters and 1 name for another fish species. Scad (*Selar*) is one of the many genera of Indonesian fishery catches, consisting of 2 clusters namely *Selar* and *Bentong*. The *Selar* cluster consists of *Selaroides leptolepis* species and the *Bentong* cluster consists of *Selar crumenophthalmus* and *Selar boops* species (DJPT, 2013). The naming system of Indonesian fish species is only based on the names of fish clusters and not based on fish species, causing a contradiction even errors in identification. This condition also informs that the naming system of fish species (fish names) in Indonesia has not been standardized and potentially leads to differences in assumptions and perceptions in fish species nomenclature.

A preliminary study with a morphological approach indicated 4 species of *Selar* fish caught around the Bitung waters, namely *Tude*, *Oci*, *Tude Batu* and, lastly Ekor Kuning Napo which is considered as a reef fish by the fishermen community. Some of the main characteristics of the *Selar* genus used for initial identification of its species are orbital diameter, black spots on the gill cover, scute, and yellow and orange stripes along the fish body. The differences in assumptions from the fishermen community and the common people in relation to the species of *Selar* caught in Bitung waters, which is interesting to study further to scientifically prove the two assumptions. The common people assume that the *Selar* genus in Bitung consists of three species, namely *Tude*, *Oci*, and *Tude Batu* while the fishermen community assumes that there are only two species of *Selar*, namely *Tude* or

Oci and *Tude Batu*. It should be known that the fishermen community referred in this research were those carrying out fishing activities, collecting traders, retailers, and fish sellers while the common people referred in this research were those with a status of non-fisherman.

METHODS OF RESEARCH

This research was conducted from March to July 2018, where samples from each target fish species were separated using the main morphological features of each Selar species including scute shape, strip colour along the body, black spots on the gill cover, orbital diameter (eye size), head height, and jaw length. For the purpose of identifying characters morphometrically, the number of samples taken was 50 for each Selar species so that the total sample was 200 fishes, using 20 landmarks with 19 morphometric characters and 18 truss morphometrics.

Data of 19 truss morphometrics obtained from each species were arranged in the form of similarity and difference matrices using the Excel program. Then, it was analyzed using principal component analysis (PCA) to obtain a truss morphometric grouping with the mechanism of plotting between PCA1 and PCA2 of one another species with SPSS 16.0 program. Cluster analysis was conducted to determine the level of species morphological kinship using hierarchical cluster analysis in a dendrogram.

The DNA analysis was carried out by taking the samples of fish back meat and then put it into a sample bottle (microtube) which was filled with 95% ethanol solution. There was only one part of a meat sample for each species to be analyzed so that the total sample for DNA analysis amounted to 4 samples. Before doing DNA isolation, the fish meat samples were temporarily stored in a freezer with a temperature of minus 40^o C.

Sequencing results were edited and analyzed using the BioEdit program (Hall, 1999). The sequences were done in two ways, namely *forward* (F) and *Reverse* (R), then aligned to obtain a consensus of nucleotide sequences. The alignment results were matched with the already available sequences in GenBank online (www.ncbi.nlm.nih.gov) through the Basic Local Alignment Search Tool (BLAST) (Altschul *et al.*, 1997). Sequences of all species were analyzed using the Neighbour-Joining Tree method with the help of MEGA6 software (Tamura *et al.*, 2013). The whole position of the sample was made in the default position with the number of bootstraps changed in the position of 1000 replications (Ikejima *et al.*, 2004). Sequencing results from all individuals were compared with all the sequences of *Selar crumenophthalmus*, *Selar boops*, and *Selaroides leptolepis* originating from GenBank (<https://www.ncbi.nlm.nih.gov>). Phylogenetic reconstruction was carried out using the maximum-likelihood (Miligan, 2003) with the help of MEGA6 software.

RESULTS AND DISCUSSION

Based on morphological and morphometric approaches (Table 1) using the main characteristics of the Selar genus, this research obtained 3 (three) species of the Selar genus identified in Bitung waters, namely *Selar crumenophthalmus* (Bloch, 1973) for *Oci* species, *Selar boops* (Cuvier, 1833) for *Tude Batu* species, and *Selaroides leptolepis* (Cuvier, 1833) for *Ekor Kuning Napo* species. Specifically, the Tude species has not been able to be categorized in the three species mentioned above due to the different morphology, allegedly belonging to the sub-species of *S. crumenophthalmus*. Therefore, it was necessary to confirm it genetically to ensure the species was valid. Measurement of morphological characters can be used as special characteristics and relationship variations in the taxonomy of fish clusters (Misra & Easton, 1999). The most important morphological characters in distinguishing the 4 (four) species of Selar fish caught in Bitung waters include *scute*, *eye diameter*, *black spots on the gill cover*, *yellow and orange strips along the body*, *jaw length*, and *mouth shape*.

Table 1 – Morphometric Measurement (Average + Standard Deviation) of *Selar* clusters in Bitung Waters

Morphological Character	Tude	Oci	Tude Batu	Ekor Kuning Napo
Standard Length (SL) (mm)	149.65±9.44	203.88±9.44	186.96±16.19	173.33±5.19
Comparison with SL:				
Head Length	0.26±0.33	0.28±0.33	0.30±0.01	0.26±0.01
Pre Dorsal Length	0.32±0.32	0.31±0.40	0.37±0.01	0.35±0.01
Pre Ventral Length	0.31±0.37	0.33±0.37	0.35±0.01	0.31±0.01
Pre Pectoral Length	0.27±0.34	0.28±0.33	0.29±0.01	0.26±0.02
Second anal fin base length	0.06±0.36	0.29±0.34	0.19±0.01	0.36±0.01
Anal fin base total length	0.32±0.44	0.29±0.40	0.39±0.02	0.44±0.01
Second dorsal fin base length	0.16±0.39	0.33±0.38	0.54±0.01	0.40±0.02
Dorsal fin base total length	0.37±0.58	0.48±0.56	0.54±0.02	0.56±0.02
Dorsal Body Depth	0.79±0.93	0.75±0.92	0.94±0.04	0.25±0.01
Comparison with HL:				
Snout length	0.31±0.38	0.32±0.38	0.34±0.02	0.36±0.01
Eye diameter	0.26±0.32	0.29±0.34	0.31±0.03	0.27±0.01
Post-orbital length	0.34±0.44	0.34±0.42	0.37±0.03	0.39±0.02
First anal fin base length	0.07±0.23	0.06±0.21	0.19±0.04	0.25±0.02
Pectoral fin length	0.31±0.37	0.33±0.37	0.35±0.01	0.29±0.01
Anal Height	0.82±1.00	0.76±0.96	0.97±0.03	0.27±0.02
First dorsal fin base length	0.07±0.23	0.32±0.21	0.45±0.10	0.58±0.03
Jaw length	0.30±0.46	0.40±0.48	0.45±0.03	0.41±0.02
Maximum scute width	0.11±0.19	0.10±0.13	0.22±0.02	0.08±0.01

Information obtained from Table 1 above suggests that several truss morphometric values resulted from this research are different from previous studies although the difference is not too significant. This is mainly because the studied fishes had different sizes and the fish sampling locations were also geographically different. The causal factors for variations in size on the measurement of fish parameters despite in the same species consist of sample fish sizes, genetic factors, water conditions, and growth. The other possible factors include differences in genetic structures, water environment conditions, ecological conditions, geographical isolation and environmental factors of physical waters where various species of fish inhabit (Tzeng *et al.*, 2000; Naesjeetal, 2004; Poulet *et al.*, 2004).

Table 2 – Comparison of *S. crumenophthalmus* truss morphometric values of previous studies with this research (Bitung)

Morphometric truss values	Results of Previous Studies	Location	Results of this research (Bitung)
MSW: OD (maximum scute width: orbital diameter)	2.1 – 2.9 (Carpenter & Niern. 2001)	Pacific Ocean	2.67
OD: HL (orbital diameter: head length)	0.39 (Allan. 2001a)	Philippines	0.37
SNL: HL (snout length: head length)	0.26 (Allan. 2001a)	Philippines	0.35
OD: HL (orbital diameter: head length)	0.33 (Reyes. 1993a)	Philippines	0.32
SNL: HL (snout length: head length)	0.25 (Reyes. 1993a)	Philippines	0.35

Table 3 – Comparison of *S. boops* truss morphometric values of previous studies with this research (Bitung)

Morphometric Truss Values	Results of Previous Studies	Location	Results of this research (Bitung)
DBD: TL (dorsal body depth: total length)	0.26 (Reyes. 1993b)	Philippines	0.27
HL: TL (head length: total length)	0.23 (Reyes. 1993b)	Philippines	0.28
PPL – TL (pre-pectoral length: total length)	0.23 (Reyes. 1993b)	Philippines	0.32
OD – HL (orbital diameter: head length)	0.39 (Reyes. 1993b)	Philippines	0.31

Furthermore, the information presented in Table 2, 3, and 4 indicates that there is a slight difference in the truss morphometric values between previous findings taken from the site <http://www.fishbase.org> and the results of this research which was conducted in Bitung waters. In morphometric measurements on previous findings, there was only one fish taken as the measurement sample. Meanwhile, the number of sample fish used in this research was 50 for each Selar species, so the total sample amounted to 200 fishes. The measurement results of each species then used the average value of the 50 sample fish for each morphometric truss value. This is thought to be the cause of the differences in truss morphometric values obtained. Kharat *et al.* (2008) stated that the occurrence of differences in measurement results could be due to differences in the number and variation in the sampling size of fish used as the object of research.

Table 4 – Comparison of *S. leptolepis* morphometric truss values of previous studies with this research (Bitung)

Morphometric Truss Values	Results of Previous Studies	Location	Results of this research (Bitung)
SL - OD (Scute length: orbital diameter)	2.1 – 2.9 (Carpenter & Niem. 2001)	Pacific Ocean	2.67
OD – HL (Orbital diameter: head length)	0.33 (Allan. 2001b)	Philippines	0.32
SL – HL (Scute length: head length)	0.26 (Allan. 2001b)	Philippines	0.35
OD – HL (Orbital diameter: head length)	0.33 (Reyes. 1993c)	Philippines	0.32
SL – HL (Scute length: head Length)	0.25 (Reyes. 1993c)	Philippines	0.35

The morphological and morphometric characters of the 4 (four) *Selar* species identified in Bitung waters had a different range of values. Thus, to cluster the morphometric truss values, PCA analysis was carried out. Cluster analysis using the main component (PCA1) and PCA2 obtained a morphological clustering distribution of each species based on the truss morphometric values (Figure 1). The analysis results showed that 4 clusters of truss morphometric distribution were formed based on the fish species. In other words, it can be informed that the 4 *Selar* species caught in Bitung waters had different morphological characters and could be assumed to be different species.

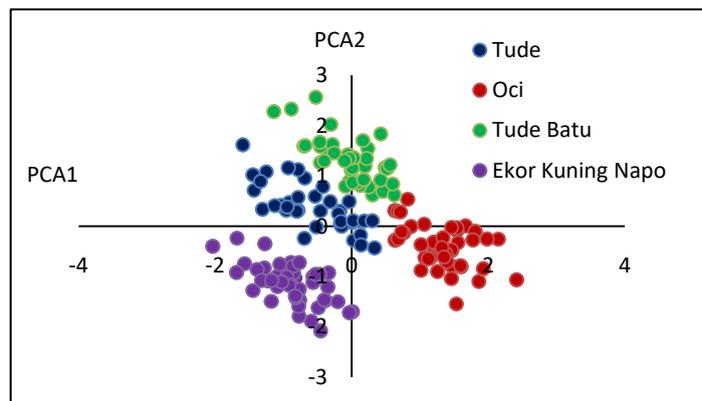


Figure 1 – PCA1 and PCA2 Plots of Truss Morphometric Values n

The grouping of *Selar* species based on truss morphometric values (Figure 1) resulted from the PCA analysis based on 20 morphological characters shows that the dot position for *Ekor Kuning Napo* species is in the left downward (purple dots), that for *Oci* species is in the right slightly downward (red dots), that for *Tude* species is in the center leaning upward (blue

dots), and that for *Tude Batu* is in the center slightly upward (green dots). Morphological variations between species can be influenced by environmental ecological conditions and food availability (Muchlisin & Fajri, 2015).

The results of the hierarchical cluster analysis in the form of a dendrogram (Figure 2) inform that based on the morphological characters of *Selar* caught in the waters of Bitung, there were 3 clusters found. Cluster I consisted of *Tude* and *Tude Batu* *Selar* species which had a fairly close linkage distance of 0.1. Furthermore, Cluster II consisted of *Oci* *Selar* species and the two *Selar* species of Cluster I (*Tude* and *Tude Batu*) with a linkage distance of 0.15 while Cluster III consisted of *Ekor Kuning Napo* *Selar* species which were separated from Cluster I and II with a linkage distance of 1.05.

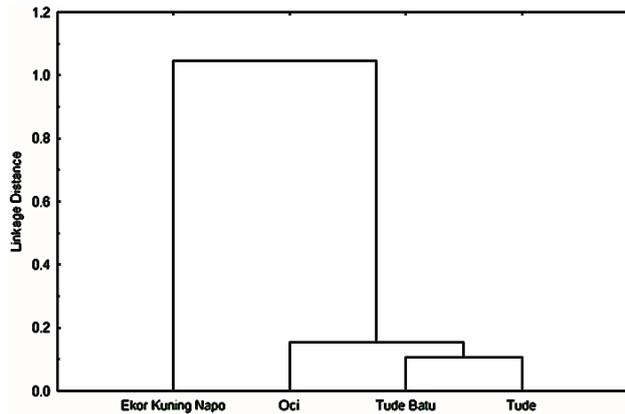


Figure 2 – Dendrogram of Hierarchical Cluster Analysis of 4 Species of *Selar* Fish Caught in the Waters around Bitung

The PCA analysis of morphological characters of *Selar* genus in the waters around Bitung suggests that there were 4 *Selar* clusters or species formed (Figure 11) while the hierarchical cluster analysis in the form of a dendrogram (Figure 2) indicates 3 *Selar* clusters or species, causing doubts in determining valid species. Each species has different morphological characters, so genetic clarification and confirmation need to be done through DNA-COI to ascertain and prove whether *Selar* fish caught in the waters around Bitung consists of 4 species or 3 species. With these results, it can be learned that it is very difficult to determine a fish species in the same genus only based on differences in morphological characters, so it needs to be integrated with genetic analysis to determine validly the species. Victor *et al.* (2009) stated that in many cases, it is very difficult to identify fish using only the morphological characteristics. Wiadnya *et al.* (2015) argued that morphological identification is not enough to ensure a species of fish despite having differences, so genetic confirmation is required.

From the phylogenetic reconstruction using the neighbour-joining method (Figure 3) and the maximum likelihood method (Figure 4), it can be obtained that *Tude* and *Oci* *Selar* species had a similarity value of 90%, concluding that these two species are included in one species, namely *Selar crumenophthalmus*. The results of phylogenetic reconstruction using the BLAST method with sequences from the GenBank showed that *Tude* and *Oci* *Selar* species had a similarity value of 90% with a sequence of JF494491.1. These results prove to the people of Bitung that *Tude* and *Oci* *Selar* species which have been assumed to be different species turned out to be similar based on their morphological and morphometric characteristics. Meanwhile, *Tude Batu* *Selar* species had a similarity value of 90% with a sequence of JX261008.1, concluding that *Tude Batu* *Selar* species is *Selar boops* species. Lastly, *Ekor Kuning Napo* *Selar* species showed a similarity value of 98% with a sequence of JX261390.1 so that it can be concluded that this species belongs to *Selaroides leptolepis* species.

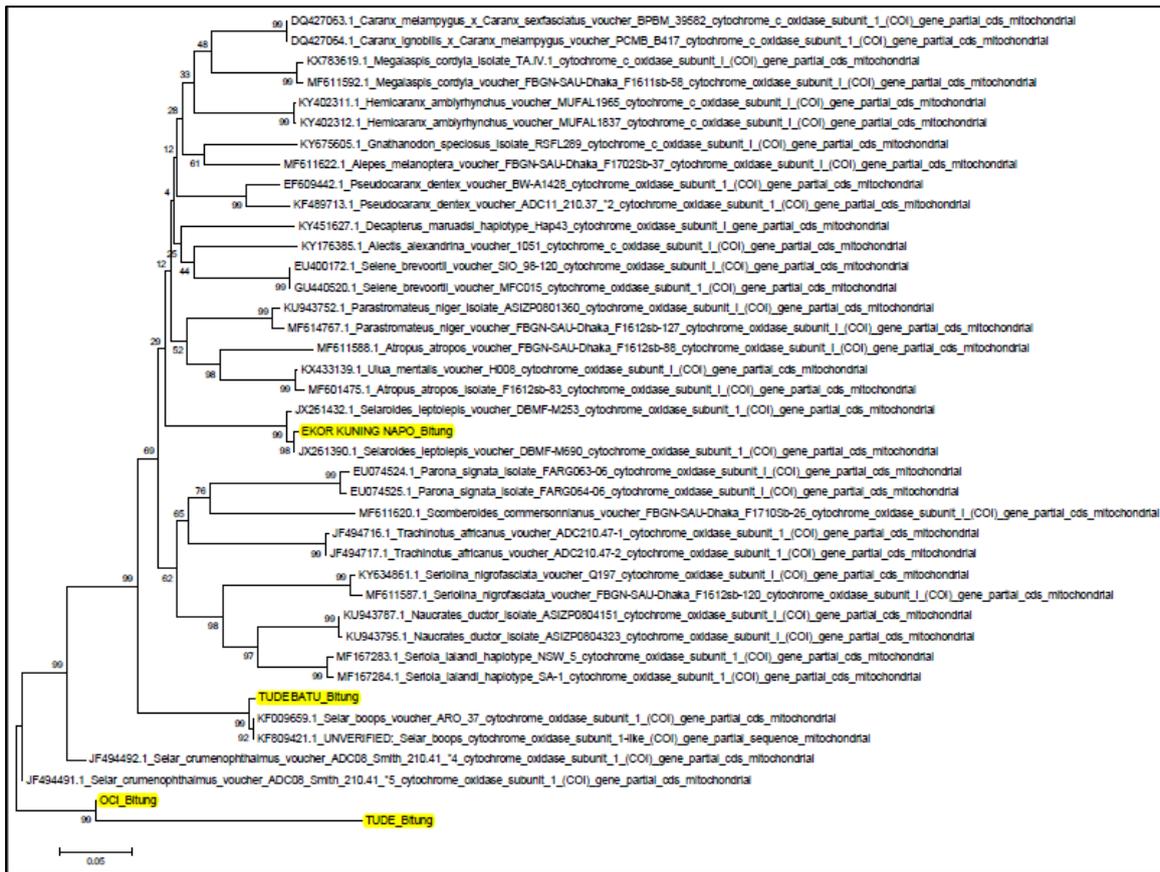


Figure 3 – Phylogenetic Reconstruction of 4 Selar Species in Bitung Waters Using Neighbour-Joining Method (Tamura *et al.*, 2013)

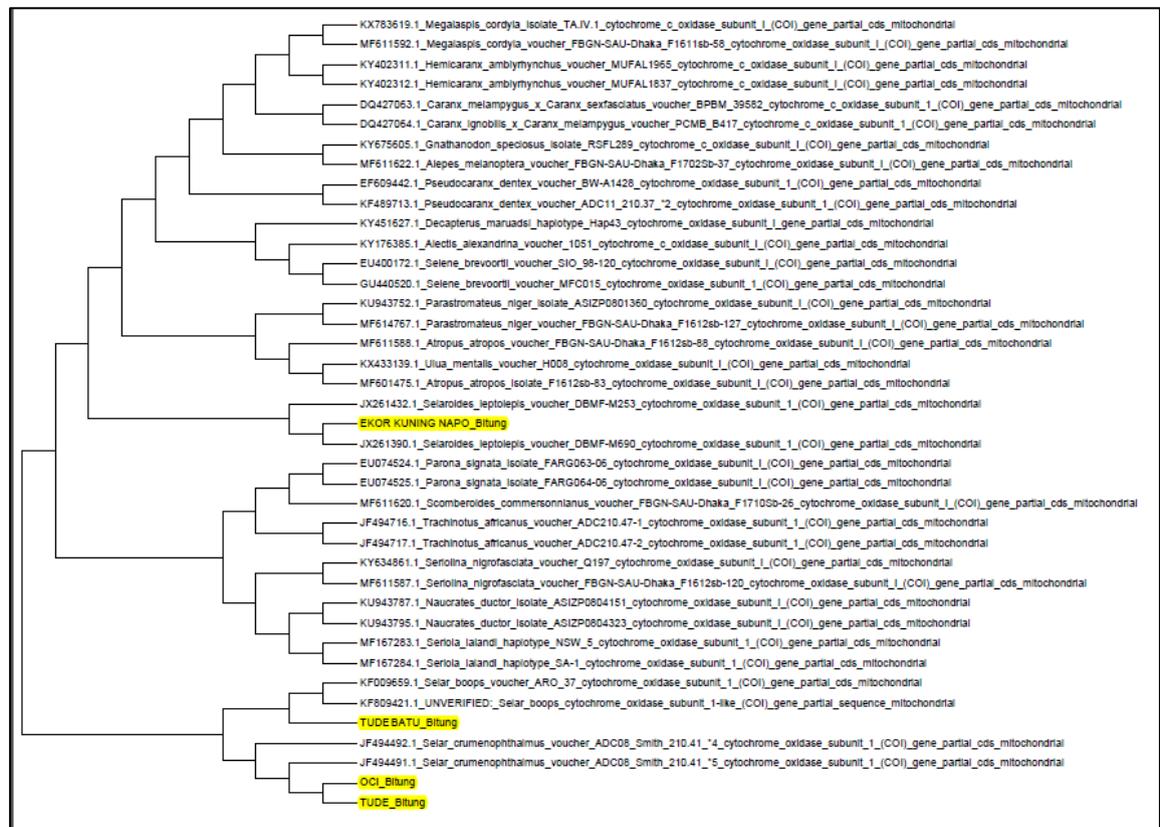


Figure 4 – Phylogenetic Reconstruction of 4 Selar Species in Bitung Waters Using Maximum Likelihood Method (Milligan, 2003)

The genetic analysis of DNA-COI is based on the phylogenetic reconstruction of 4 sequences of Selar fish caught in Bitung waters, proving that the Selar fish genus caught in the Bitung waters consists of 3 species only. The first species is *Selar crumenophthalmus* which is a representation of *Tude* and *Oci* Selar species, the second species is *Selar boops* representing *Tude Batu* species, and the third species is *Selaroides leptolepis* as a representation of *Ekor Kuning Napo* species.

CONCLUSION AND RECOMMENDATIONS

Based on the data analysis results and discussion above, the assumption of the people of Bitung City that there are four Selar species caught in Bitung waters with local names of *Tude*, *Oci*, *Tude Batu*, and *Ekor Kuning Napo* is proven to be invalid because genetically there are only three species identified, namely *Selar crumenophthalmus* (*Tude* and *Oci* species), *Selar boops* (*Tude Batu*), and *Selaroides leptolepis* (*Ekor Kuning Napo*).

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MATHEMATICAL MODELING OF THIN LAYER DRYING OF SALTED YELLOWTAIL FISH UNDER OPEN SUN AND IN GREENHOUSE DRYER

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ABSTRACT

The thin layer dryer model was used to describe the characteristics of changes in water content of salted yellowtail dried under the open sun and by using a greenhouse dryer. Thirteen different thin layer dryer models were used to predict fish water content values. The results of the conducted experiments validated the values. From the results of modeling for open sun drying, it was discovered that Modified Henderson and Pabis were the most suitable models to be used. While for drying using greenhouse dryers, it was suitable to use the Diffusion Approach model and Verma et al. From the performance of modeling indicator, it was shown that the value of the correlation coefficient (R) approaching 1, where the mean square of deviation between experimental, predicted values and root mean square error analysis (RMSE) have infinitesimal values.

KEY WORDS

Thin layer drying model, open sun drying, greenhouse dryer, yellowtail fish.

Fish meat contains a good source of protein (15-20%), vitamins, carbohydrates, and other substances that are soluble in water (Sobukola & Olatunde, 2011). Moreover, fresh fish products contain 80% moisture content (Darvishi, Azadbakht, Rezaeiasl, & Farhang, 2013). It makes the fish very quickly experience quality degradation. Fish is one type of food that contains water, where the water content in fish must be discarded. If fresh fish is not used directly or not processed into finished products, the fish will undergo a decay process (Sidhi, Pujianto, Prasetyo, & Muhfizar, 2017). Proper handling of fish is needed so that the quality can be maintained. There are various methods of preserving fish such as fumigation, drying, salting, and freezing. The drying of food products is an important thing to increase resistance on degradation due to water activity reduction (Bellagha, Amami, Farhat, & Kechaou, 2002).

Drying and salting fish is a technique that has long been used for preserving fish (Boudhrioua, Djendoubi, Bellagha, & Kechaou, 2009). In some developing countries, dried salted fish is one source of protein at low prices (Bellagha, Sahli, Farhat, Kechaou, & Glenza, 2007). Fish drying can be done by using traditional methods, namely open sun drying or solar drying using hot air. The open sun drying process has many disadvantages including long drying times, requires a large area, the quality of fish decreases due to dust, prone to animal disturbances such as flies, chickens, cats, and dogs and requires considerable labor (Setyoko & Darmanto, 2012). Comparing to open sun drying, the use of greenhouse dryers leads to reducing drying time up to 50% and a significant increase in product quality in terms of color, texture, and taste (Das & Tiwari, 2008). Solar dryer for fish products has been developed in several studies. Bala and Mondol (2001) investigated solar tunnel dryers to dry silver jewfish. Sengar, Khandetod, and Mohod (2009) examined solar dryers with the cost of dry shrimp (Kolambi). (Akinola, Akinyemi, & Bolaji, 2006) Akinola, Akinyemi, and Bolaji (2006) conducted a study of traditional drying and solar drying systems for fish in Nigeria. Handoyo, Kristanto, and Alwi (2003) developed an indirect solar dryer system with forced ventilation open circuit as a solar fish dryer. (Bintang, Pongoh, & Onibala, 2013) Bintang, Pongoh and Onibala (2013) made a solar fish dryer with a loading and unloading system. Fudholi, Ruslan, and Othman (2013) developed a hybrid solar drying system (HSDS) with rotating rack for salted silver jewfish. Sidhi, Pujianto, Prasetyo, and

Muhfizar (2018) conducted an experimental study of yellowtail fish drying under an active greenhouse dryer.

The thin layer equation describes the overall drying phenomenon, regardless of the control mechanism. This equation has been used to estimate the drying time of some products and to generalize the drying curve (Akpınar & Bicer, 2008). Several studies have used the thin layer model for the fish drying process. Kituu et al. (2010) used mathematical thin layer models for the Tilapia fish drying process in the solar tunnel dryer. Guan, Wang, Li, and Jiang Guan, Wang, Li, and Jiang (2013) used thin layer modeling for fresh tilapia fillets using hot air convection. Sobukola and Olatunde (2011) conducted thin layer modeling for the drying process of African catfish with different brine concentrations and temperatures. Jain and Pathare (2007) used thin layer modeling for the drying process of shrimp and chelwa fish (Indian minor carp) in open sun drying. Bai, Li, Sun, and Shi (2011) used mathematical modeling for drying fish slices using the electrohydrodynamic (EHD) drying layer method. Darvishi et al. (2013) conducted thin layer modeling for sardine fish dried in microwave heaters.

Yellowtail fish is a type of consumption fish that has essential economic value and is one type of reef fish that lives in warm waters around the Indo Pacific. In this study, yellowtail drying was carried out under open sun drying and greenhouse solar dryer. The mathematical thin layer dryer for drying yellowtail fish has not been done yet. Therefore, this study aims to model salted yellow fish as thin layer dryers under open sun drying and solar greenhouse dryers.

METHODS OF RESEARCH

Material and Experimental Procedure. The greenhouse dryer shown in Figure 1 has a parabolic roof with paving blocks as a base. The surface area is 6.5 m^2 , with dimensions of length and width are $3.25 \text{ m} \times 2 \text{ m}$. The greenhouse length sides lead to the north and south in order to suit the movement of the sun. Polyethylene plastic was used for the material of greenhouse cover. The greenhouse framework made of galvanized pipes. Six 12 VDC exhaust fans with 100 WP solar cell as the electric energy supplier are used to circulate air inside the greenhouse.



Figure 1 – The appearance of the front and back sides of the greenhouse dryer

The tests were carried out with two methods, i.e., open sun drying and under the greenhouse dryer. The drying was done at Politeknik Kelautan and Perikanan Sorong for three days in December 2017 to reduce the water content of fish products. The yellowtail fish was used in this study. It was dried for 8 hours every day. The fishes were given salt of $0.2 \text{ gr NaCl} / \text{gr}$ of fish mass on the dry salted method. The mass of fish used during the experiment about 0.3 kg either for open sun drying or under the greenhouse dryer. The dried fishes for three days were dried further by using the oven for 24 hours at a temperature of 105°C (Mujaffar & Sankat, 2005). The method was done to find out the initial water content of the fish.

In this study, DHT 22 sensors were used to measure air humidity and temperature both in the environment and inside the greenhouse by using a calibrated data logger microcontroller. The data recording of air humidity and the temperature were set once every hour during the drying process. A digital scale was used to measure the changes of fish mass during the drying process. The fish mass data was manually recorded to measure changes in mass.

Model Thin Layer Dryer. Moisture ratio (MR) of the product shown in Eq. (1). The equation can be simplified to M/M_0 (Akpinar & Bicer, 2008; C. Ertekin & Yaldiz, 2004; Jain & Pathare, 2007). The dry basis method was used to calculate the moisture ratio equation. M is the moisture content at the time of measurement, M_0 is the initial moisture content of fish, and M_e is the equilibrium moisture content which has a very smaller value than M and M_0 (Jain & Pathare, 2007). The thin layer dryer model used to describe the drying process with different moisture ratio model Eq. (5-16) in Table 1.

$$MR = \frac{M - M_e}{M_0 - M_e} \quad (1)$$

A statistic computer program was used for the regression analysis of the decrease in product moisture ratio, so the models which appropriate to the product drying process can be obtained. The correlation coefficient (R), the mean square of the deviations between the experimental and predicted values (χ^2), and the root mean square error analysis (RMSE) in (Eq. 2-4) were used to determine the goodness of the fit on regression (Akpinar & Bicer, 2008; Rabha, Muthukumar, & Somayaji, 2017). The correlation coefficient has a range value between 0 – 1. The greater relationship exists between experimental and predicted values were closer to 1 (Can Ertekin & Firat, 2017). The better the goodness of the fit for regression also shown by the lower values on χ^2 and RMSE (Akpinar & Bicer, 2008; C. Ertekin & Yaldiz, 2004).

$$R^2 = \frac{\sum_{i=1}^n (MR_i - MR_{pre,i}) \cdot \sum_{i=1}^n (MR_i - MR_{exp,i})}{\sqrt{[\sum_{i=1}^n (MR_i - MR_{pre,i})^2] \cdot [\sum_{i=1}^n (MR_i - MR_{exp,i})^2]}} \quad (2)$$

$$\chi^2 = \frac{\sum_{i=1}^n (MR_{exp,i} - MR_{pre,i})^2}{N - n} \quad (3)$$

$$RMSE = \left[\frac{1}{N} \sum_{i=1}^N (MR_{pre,i} - MR_{exp,i})^2 \right]^{1/2} \quad (4)$$

Table 1 – Mathematical model for drying curve

Model Name	Model	References
Newton	$MR = \exp(-kt)$	Eq. (5) Akpinar and Bicer (2008); Ertekin and Yaldiz (2004); Sonmete, Mengeş, Ertekin, and Özcan (2017)
Page	$MR = \exp(-kt^n)$	Eq. (6) Ertekin and Firat (2017); Onwude, Hashim, Janius, Nawi, and Aband, (2016); Rabha, Muthukumar, & Somayaji (2017)
Modified Page	$MR = \exp[(-kt)^n]$	Eq. (7) Arslan and Özcan (2010); Falade and Solademi (2010); Guiné, Pinho, and Barroca (2011)
Henderson and Pabis	$MR = a \exp(-kt)$	Eq. (8) Diamante, Ihns, Savage, and Vanhanen (2010); Doymaz (2012); Meisami-asl, Rafiee, Keyhani, and Tabatabaefar (2010)
Logarithmic	$MR = a \exp(-kt) + c$	Eq. (9) Doymaz (2011, 2012); Evin (2012)

Table 1 Continue			
Two-term	$MR = a \exp(-k_0t) + b \exp(-k_1t)$	Eq. (10)	Erbay and Icier (2010); Kouchakzadeh and Shafeei (2010); Kumar, Sarkar, and Sharma (2012)
Two term exponential	$MR = a \exp(-kt) + (1-a) \exp(-kat)$	Eq. (11)	Demiray and Tulek (2012); Taheri-Garavand, Rafiee, and Keyhani (2011); Vijayan, Arjunan, and Kumar (2016)
Wang and Singh	$MR = 1+at+bt^2$	Eq. (12)	Das Purkayastha, Nath, Deka, and Mahanta (2013); Janjai (2012); Taheri-garavand, Rafiee, and Keyhani (2011)
Diffusion approach	$MR = a \exp(-kt) + (1-a) \exp(-kbt)$	Eq. (13)	El-Sebaai and Shalaby (2013); Perea-Flores et al., (2012); Tahmasebi, Yu, and Han (2013)
Modified Henderson and Pabis	$MR = a \exp(-kt) + b \exp(-gt) + c \exp(-ht)$	Eq. (14)	Erbay and Icier (2010a) Meisami-asl et al. (2010); Taheri-garavand et al. (2011)
Verma et al	$MR = a \exp(-kt) + (1 - a) \exp(-gt)$	Eq. (15)	Kumar et al. (2012); Meisami-asl et al. (2010); Taheri-Garavand et al. (2011)
Midilli and Kucuk	$MR = a \exp(-kt^n) + bt$	Eq. (16)	Akhondi, Kazemi, and Maghsoodi, (2011); Evin (2012); Liu et al. (2014)
Thompson	$t = a \ln(MR) + b(\ln(MR))^2$	Eq. (17)	(Akpinar & Bicer, 2008; Erbay & Icier, 2010a; Pardeshi, Arora, & Borker, 2009)

RESULTS AND DISCUSSION

In the drying process for three days, as shown in Figure 2, the air temperature in the greenhouse dryer ranges from 32 – 54 °C. The air temperature in the greenhouse tends to be higher than the ambient air temperature which only ranges from 29.8 – 39°C. Unlike the temperature, the value of air relative humidity in the greenhouse tends to be lower compared to ambient relative humidity. The range of air humidity values in the drying greenhouse ranges from 24.90 – 58.71%, while the air humidity value of the environment ranges from 43.26 – 82.15%.

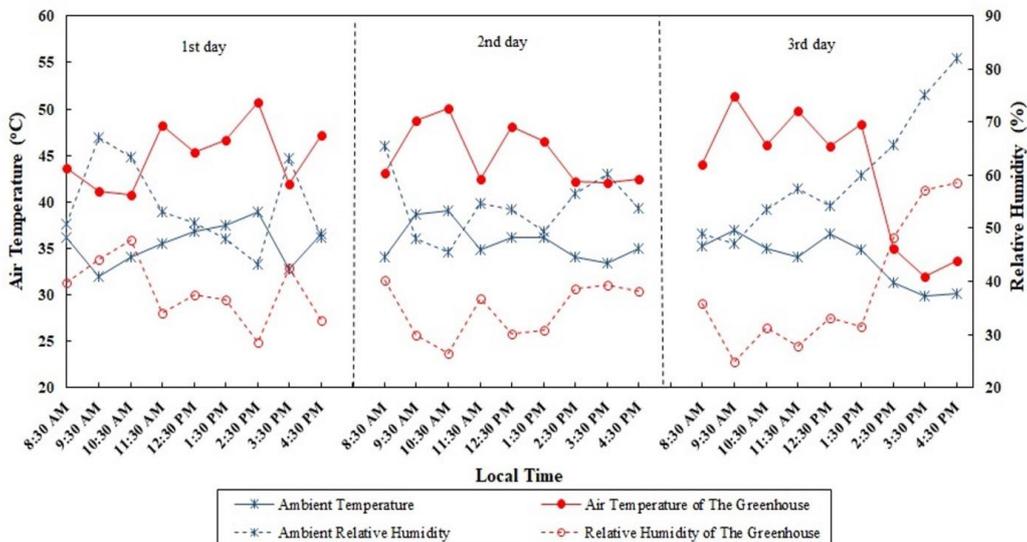


Figure 2 – Temperature and relative humidity of air in ambient and greenhouse condition

Figure 3 shows the change in water content of fish (dry basis) with two drying methods are with open sun and in the greenhouse dryer. The drying process in the greenhouse dryer looks faster to reduce fish water content compared to the open sun drying method. It proves that the drying rate of fish products in the greenhouse is higher than open sun drying, which is in line with the high air temperature and low relative humidity in it.

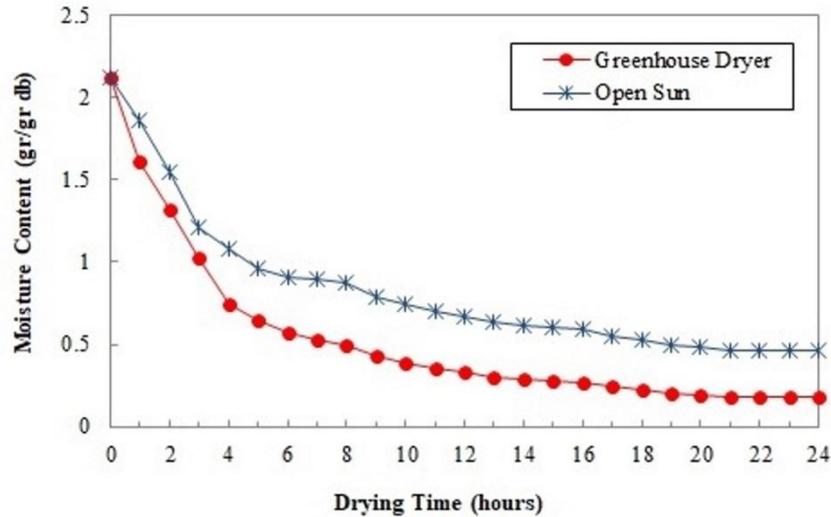


Figure 3 – The moisture content of fish under the open sun and greenhouse dryer for the drying process

Moisture ratio data from experimental results and calculations using thin layer drier modeling was processed using a statistic program on the computer. Each thin layer model was evaluated using the correlation coefficient (R), the mean square of predicted and predicted values (χ^2), and the root means square error analysis (RMSE) in (Eq. 2-4). The results of statistic computer program analysis obtained shown in Tables 2 and 3. The suitable model for describes open sun drying of yellowtail fish with dry salting method of 0.2 gr NaCl / gr mass of fish as shown in Table 2 is Modified Henderson and Pabis model, where the value $R = 0.9934$, $\chi^2 = 0.00053$, and $RMSE = 0.01896$. Unlike open sun drying, the drying process in the greenhouse dryer has two of the most suitable model which are Diffusion approach and Verma et al. as shown in Table 3. The value of $R = 0.9975$, $\chi^2 = 0.0002$, and $RMSE = 0.0121$ for both models have the same value even though the constants in the two equations are different.

Table 2 – Moisture Ratio (MR) modeling according to drying time for open sun drying of yellowtail fish

No	Model Name	Model Constants	R	χ^2	RMSE
1	Newton	$k = 0.09865$	0.8017	0.00892	0.09244
2	Page	$k = 0.2699, n = 0.577$	0.9738	0.00129	0.03430
3	Modified Page	$k = 0.3164, n = 0.3118$	0.8017	0.00977	0.09443
4	Henderson and Pabis	$a = 0.8264, k = 0.07667$	0.8828	0.00578	0.07262
5	Logarithmic	$a = 0.7526, k = 0.2187, c = 0.2366$	0.9831	0.00092	0.02816
6	Two-term	$a = 0.5639, k_0 = 0.3736, b = 0.4608, k_1 = 0.03364$	0.9930	0.00043	0.01856
7	Two term exponential	$a = 0.2087, k = 0.3726$	0.9010	0.00488	0.06672
8	Wang and Singh	$a = -0.09346, b = 0.002704$	0.8533	0.00729	0.08158
9	Diffusion approach	$a = 0.5505, k = 0.3477, b = 0.09322$	0.9923	0.00042	0.01905
10	Modified Henderson and Pabis	$a = -157.5, k = 1.25, b = 0.561, g = 0.04468, c = 157.9, h = 1.244$	0.9934	0.00053	0.01896
11	Verma et al	$a = 0.4495, k = 0.03241, g = 0.3477$	0.9923	0.00042	0.01905
12	Midilli and Kucuk	$a = 1.022, k = 0.2438, n = 0.7235, b = 0.005663$	0.9851	0.00090	0.02707
13	Thompson	$a = 0.7647, b = -0.1236$	0.8017	0.01079	0.09655

Table 3 – Moisture Ratio (MR) modeling according to drying time for drying of yellowtail fish in greenhouse dryer

No	Model Name	Model Constants	R	χ^2	RMSE
1	Newton	$k = 0.192$	0.9195	0.0046	0.0663
2	Page	$k = 0.3629, n = 0.6554$	0.9855	0.0009	0.0286
3	Modified Page	$k = 0.4214, n = 0.4556$	0.9195	0.0050	0.0677
4	Henderson and Pabis	$a = 0.8821, k = 0.1641$	0.9369	0.0039	0.0599
5	Logarithmic	$a = 0.8771, k = 0.2746, c = 0.1043$	0.9928	0.0005	0.0206
6	Two-term	$a = 0.275, k_0 = 0.05235, b = 0.7299, k_1 = 0.3774$	0.9975	0.0002	0.0124
7	Two term exponential	$a = 0.2745, k = 0.5257$	0.9607	0.0024	0.0472
8	Wang and Singh	$a = -0.1196, b = 0.003641$	0.7789	0.0139	0.1125
9	Diffusion approach	$a = 0.7282, k = 0.3728, b = 0.1388$	0.9975	0.0002	0.0121
10	Modified Henderson and Pabis	$a = 0.6915, k = 0.4047, b = 0.0003735, g = -0.1177, c = 0.3153, h = 0.06197$	0.9974	0.0003	0.0133
11	Verma et al	$a = 0.7282, k = 0.3728, g = 0.05175$	0.9975	0.0002	0.0121
12	Midilli and Kucuk	$a = 1.011, k = 0.3234, n = 0.7832, b = 0.003153$	0.9938	0.0005	0.0195
13	Thompson	$a = -0.2864, b = 0.33$	0.9196	0.0056	0.0692

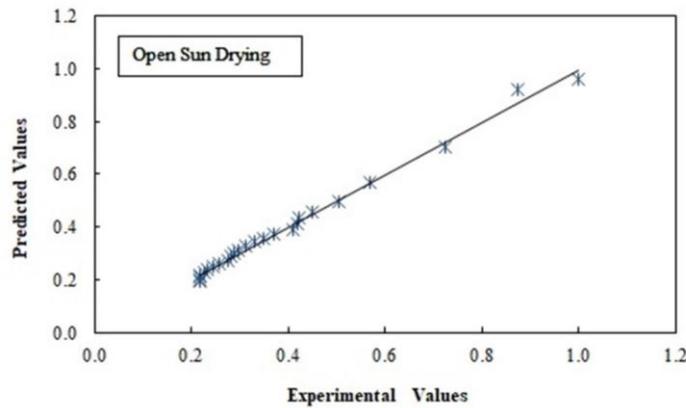


Figure 4 – Comparison of experimental and predicted moisture ratio (MR) by the resulting Modified Henderson and Pabis model in open sun drying

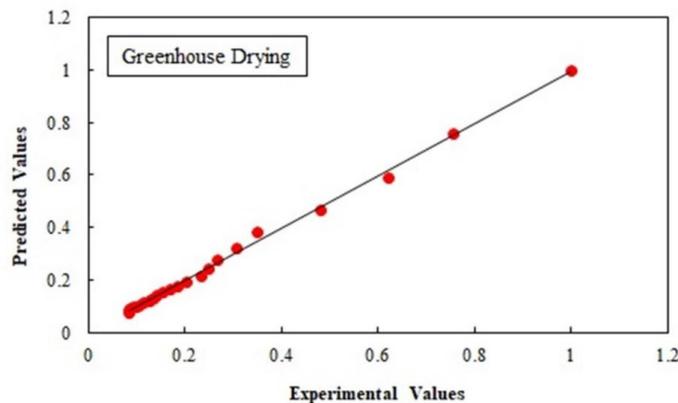


Figure 5 – Comparison of experimental and predicted moisture ratio (MR) by the resulting Diffusion approach model in greenhouse dryer

The modeling results in the drying of yellowtail fish with open sun and drying greenhouses were validated using the results of each experiment. Figures 4 and 5 shows a comparison between predictive values from modeling that match the experimental results for both drying methods. This is evidenced by the experimental data indicated by an asterisk (figure 4) or a circle (figure 5) generally around a straight line which is predictive data from modeling.

CONCLUSION

Modeling of thin layer dryer in this study was used to model the drying process of salted yellowtail fish (0.2 gr NaCl / gr of fish mass) in the open sun and greenhouse dryer. Thirteen models were used to describe changes in moisture content characteristics in both drying methods. Modified Henderson and Pabis is a suitable model to describe the drying process with an open sun with a value of $R = 0.9934$, $x^2 = 0.00053$, and $RMSE = 0.01896$. Diffusion approach and Verma et al. are two suitable models describing the drying process in a greenhouse dryer with values $R = 0.9975$, $x^2 = 0.0002$, and $R.MSE = 0.0121$.

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SUSTAINABLE SHRIMP FISHERIES MANAGEMENT AT SORONG SELATAN OF WEST PAPUA USING EAFM TOOLS IN FISHING DOMAIN TECHNIQUES

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ABSTRACT

The purpose of this study is to determine the status of the ecosystem approach to fisheries management (EAFM) in the Fishing Technique Domain for shrimp commodities in South Sorong Regency. This research was conducted in September 2018 and took place in the South Sorong Regency of West Papua Province precisely in Teminabuan District, Konda District, and Inanwatan District. The data collection technique used in this study is observation where the researchers conducted a direct observation of the object of the research to see the activities in the area closely. From the results of the study, the analysis of EAFM composite index in the domain of fishing technique in South Sorong Regency showed that destructive fishing for banana shrimp (*Penaeus merguensis*) is in good condition with a green modeling flag and an average value of 3. In this study, the indicators of fishing gear and fishing aids modification, the indicators of fisheries capacity and fishing efforts, as well as capture selectivity are in good status. Whereas, the indicators that have bad status and need to be prioritized for future sustainable fisheries management are fishing with legal documents and fishing vessel crew certificates.

KEY WORDS

Management status, fishing technique domain, EAFM.

Indonesia is one of the largest maritime and archipelagic countries in the world. This country is located in the tropics with a coastline length of 81,000 km, 18.4% of the 440,000 km long coastline of the world. The diversity of biological resources including fish resources in Indonesia is very high. Indonesian waters have 27.2% of the world flora and fauna species, including 12% mammals, 23.8% amphibians, 31.8% reptiles, 44.7% fish, 40% mollusks, and 8.6% seaweed. From this potential, it is shown that fish resources have the highest percentage. Indonesia has the largest potential of fisheries in the world that around 65 million tons of the potential has not been utilized optimally. It can be said that Indonesia only explored 20% of the resources (Dahuri, 2013).

The maritime and fisheries sector is one of the strategic choices to be developed, especially in Eastern Indonesia. The east area of Indonesia has great potential but has not been utilized optimally. Fisheries management is obligatory as mandated by (Law number 31, 2004) and reaffirmed in the amendment (Law number 45, 2009). Under the Law, fisheries management is defined as all efforts which cover integrated processes in information gathering, analysis, planning, consultation, decision making, and allocation of fish resources as well as the implementation and law enforcement in the fisheries sector carried out by the government or other authorities aimed to achieve the continuity in productivity of aquatic biological resources and agreed objectives.

Besides providing income benefits to the community and the country, fisheries resource management also causes some problems in the form of excessive catching and

habitat damage. Both of these problems arise due to the increase in the human population that requires food ingredients and the advancement in equipment capacity which leads to unsustainable fishing practices that cause fisheries production to decline both on a local, national, and global scale. Overfishing will decrease reproductive capacity and stock recovery capacity (Ali, 2012). Fisheries management plays an important role in realizing sustainable fisheries, especially for important fishery commodities such as shrimp. One of the shrimp producing areas in Indonesia is South Sorong Regency (Razak, Fahrizal, & Irwanto, 2018)

South Sorong Regency is a region which produces *penaeid* shrimp, one of the leading commodities in the region. The *penaeid* shrimp are captured using a *trammel net*. The use of *trammel net* as fishing gear needs to be studied so that it can be utilized continuously. The fishermen in the region keep increasing the fishing efforts to achieve maximum catch because of the high demand for shrimp. Although marine biological resources are *renewable resources*, the balance of the aquatic biological environment and the ability to recover will be disrupted if the fishing effort exceeds its carrying capacity (Sururi, Mustasim, Hoek, & Anasri, 2017). In order to maintain its sustainability, its utilization and management must be carried out rationally.

One approach that can make fisheries management better is an ecosystem approach to fisheries management (EAFM). EAFM has been identified as a fairly successful fisheries management compared to other fisheries management. It is expected that the ecosystem-based fisheries management can give more attention to the environment and fish resources without threatening the economic sector and social sector (Adrianto, et al., 2014). Therefore, the importance of knowing sustainable fishing techniques will determine the sustainability of fisheries both in terms of its ecology and economics. This becomes the background of the author to conduct a study entitled "Sustainable Shrimp Fisheries Management in Sorong Selatan, West Papua Using Eafm Tools in Fishing Domain Techniques".

METHODS OF RESEARCH

This research was conducted in September 2018 and took place in the South Sorong Regency of West Papua Province precisely in Teminabuan District, Konda District, and Inanwatan District.

The tools and materials in this research were: stationery, cameras, lapboard, recorder, shrimp, and questionnaires.

The method in this research was direct observation to take a closer look at the activities carried out (Riduwan, 2004) as well as an interview with questions to obtain information directly to the respondents. The interviews were performed verbally and face to face between interviewer and respondents (Subagyo, 2011).

The research procedure was done by conducting interviews with respondents located in Teminabuan District, Konda District, and Inanwatan District for one to two weeks.

The analysis of the data used in this study was the Flag Modeling Analysis and Descriptive Analysis. Flag Modeling analysis was carried out by using a multi-criteria analysis (MCA) approach where a set of criteria is built as a basis to analyze the performance of fisheries management region viewed from the ecosystem approach to fisheries management (EAFM) through the development of composite indices (Adrianto, Matsuda, and Sakuma, 2005) with the following stages:

- Determining the criteria for each indicator in each EAFM Domain;
- Giving a score on each indicator using Ordinal-based Likert Score 1, 2, 3;
- Determining the weight for each indicator.

The value of each indicator in the Fishing Technique Domain was analyzed using a simple arithmetic-based composite analysis. The value is displayed in the form of flag model in the following Table 1.

According to (Nazir, 2005), descriptive analysis is a method of examining the status of a group of humans, objects, sets of conditions, systems of thought, or a class of events in the present. Descriptive analysis aims to make a description, illustration, or painting

systematically, factually, and accurately about the facts and the relationship between the phenomena studied. This analysis is used to explain the status of fisheries management in South Sorong Regency and discuss the results of the EAFM assessment.

Table 1 – The Classification of Composite Index Values and Flag Model Visualization

Score	Flag Model	Description
1		Bad
2		Moderate
3		Good

Source: (Adrianto, et al., 2014).

RESULTS AND DISCUSSION

The domain of fishing technique consists of six indicators that explain the management of shrimp resources, especially banana shrimp or white shrimp (*Penaeus merguensis*) in South Sorong Regency from the aspect of fishing techniques. The six indicators are:

The indicators of destructive fishing can be seen from the use of fishing tools and methods that could damage the environment and/or do not comply with the applicable regulations. This destructive and/or illegal fishing includes: the use of hazardous materials and/or tools (such as: fish bombs, cyanide poisons, potassium, and electricity) and the use of fishing gear that does not comply with applicable regulations (such as: the operation of fishing gear in the protected habitat or not on the legal fishing lane/area).

The purpose of using this indicator is to identify the impact of fishing gear and fishing aids modification that is not in accordance with the regulation of fish resources preservations in particular water area. The fishing technique domain has the biggest value in the indicators of destructive and/or illegal fishing methods.

Based on the results of interviews with the Department of Marine and Fisheries and Marine Police of South Sorong Regency, there are no written reports regarding violations. Whereas, based on the results of interviews with the stakeholders or fishermen (Head of Village, Coordinator of Fishermen, Head of Watershed, and Tribal Chief) there are violations such as the use of *bore* roots and the occurrence of Endangered, Threatened, and Protected (ETP) species including turtles, saw sharks, and dolphins. The results of the assessment on destructive fishing methods show a value of 3 which means that the frequency of violations is <5 cases per year.

The modification of fishing gear and fishing aids is defined as the use of fishing gear and fishing aids that is not in accordance with the regulations and can cause a negative impact on fish resources.

Based on the results of interviews and direct observations in the field, no modifications are found to the construction of fishing gear such as the use of smaller webs than the applicable provisions because fishermen in the three districts do not have the expertise to modify their fishing gear. Therefore, the fishermen used standard fishing gear from the factory.

Whereas, to determine fishing ground, fishermen do not use fishing aids but by lowering the net to the bottom. If there are several shrimps, the fishermen will start their fishing operations in the area, but if there is no shrimp found, the fishermen will move to another location. Based on the description above, the indicator of fishing gear and fishing aids modification has a score of 3. This means that <25% of the target species has a size of <Lm.

Fishing capacity is defined as the maximum number of fish catches that can be produced in a certain period of time (years) by a ship or fishing vessels when fully operated, where the efforts and catches are not blocked by various fisheries management actions. The units used for fishing capacity are tons/year. Fishing capacity is calculated based on ship characteristics. The indicator that is widely used is the tonnage of a ship that shows the strength of the ship and the engine power used. In addition to the tonnage and strength, fishing gear is also often used as an indicator of fishing capacity.

Based on the Baseline Survey Report (2017) and USAID SEA Project (2018), the ratio of catching capacity is >1 with a value of 3 (good).

Capture selectivity is defined as fishing activities that are associated with the area, time, and a variety of catches. The criteria for evaluating the good or bad indicators of capture selectivity in fisheries management with an EAFM is by calculating the percentage of fishing gear which is classified as not or less selective for the total number of fishing gear in a particular water area.

Based on the Decree of the Minister of Maritime Affairs and Fisheries number 54 of 2014, a catch is classified as high selectivity if it has: fishhook; gill nets; clam collector; lift nets (boat chart, step chart), purse seine, and trap (*Sero*, *Bubu*). Meanwhile, low selectivity fishing gear is trawl (shrimp trawler, fish trawler); trawl bag (*lampara*, beach trawl); and muro-ami.

The type of fishing gear used by fishermen in South Sorong Regency is Trammel Net. Based on the criteria of environmentally-friendly fishing gear according to the Regulation of the Minister of Marine and Fisheries number 12 of 2012), the type of fishing gear operated by fishermen in South Sorong Regency is environmentally friendly because it does not destroy the habitat of the fish. The catching activity is associated with the area, time, and variety of catches. The selectivity of fishing gear is the ability of fishing gear to select the type and size of a particular catch. Thus, the capture selectivity in South Sorong Regency is 3 (high, less than 50%). In other words, the fishermen use fishing gear that is not selective by >31% of the total catches (Razak, Fahrizal, & Irwanto, 2018).

The function and size of fishing vessels for fishing operations need to have legal documents. Based on the observations, the types of fishing vessels used by fishermen in carrying out fishing activities are rowing boats, motor boats/Jhonson <3 GT, and *Jolor* boats.

Based on the results of interviews with fishermen, it is found that all fishermen who conducted fishing operations do not have legal documents because all of them owned boats under the 3GT so that they did not have a fishing permit or other letters.

The interviews also show that there is no policy from the Department of Marine and Fisheries of South Sorong Regency regarding the compliance of function and size of ships or boats with the documents owned by each fisherman. Based on the above description, the score for the indicators of the compliance of function and size of fishing vessels with legal documents is 1 (low). This means that more than 50% of the samples are not in accordance with legal documents.

The certification of fishing vessel crews that are in accordance with the regulations can be defined as fishing vessel crews who have fulfilled certain skill requirements to work on a ship. The certification is carried out to establish a responsible fishing activity for fishing vessel crews. The purpose of using this indicator is to estimate the percentage rate of samples of fishing vessels operated by certified crews and to estimate the application of responsible fishing activities in certain watersheds (KKP, 2017).

The fishing certificates are very difficult to get because the fishermen in the three districts generally work on <5 GT boats for the shrimp fishing activities. Therefore, they do not have the certificates because they are traditional fishermen.

As for the fishing operations, they usually do it based on the skills/experience only. They do not have certificates so that the score will be 1 (certificate ownership is less than 50%).

Table 2 – The Analysis of Flag Model on Six Fishing Technique Domain Indicators

Indicators	Score
1. Destructive fishing	3.00
2. Fishing gear and fishing aids modification	3.00
3. Fishing capacity and effort	3.00
4. Capture selectivity	3.00
5. The compliance of the function and size of fishing vessels with legal documents	1.00
6. The certification of fishing vessel crews based on the regulations.	1.00
Average	2.33

The results of the assessment on the fishing technique domain indicate that the management of banana shrimp (*Penaeus merguensis*) commodities is in a good condition with an average value of 3 because there are no destructive or illegal fishing activities. The results of the assessment on each indicator can be seen in Table 2.

The indicators of destructive fishing, modification of fishing gear and fishing aids, fishing capacity and effort, and capture selectivity are worth 3 or based on green flag analysis which means a good status. Whereas, the compliance of the function and size of fishing vessels with legal documents and the certification of fishing vessel crews based on the regulations are in a red flag which means a bad status with a value of 1 as presented in Figure 1.

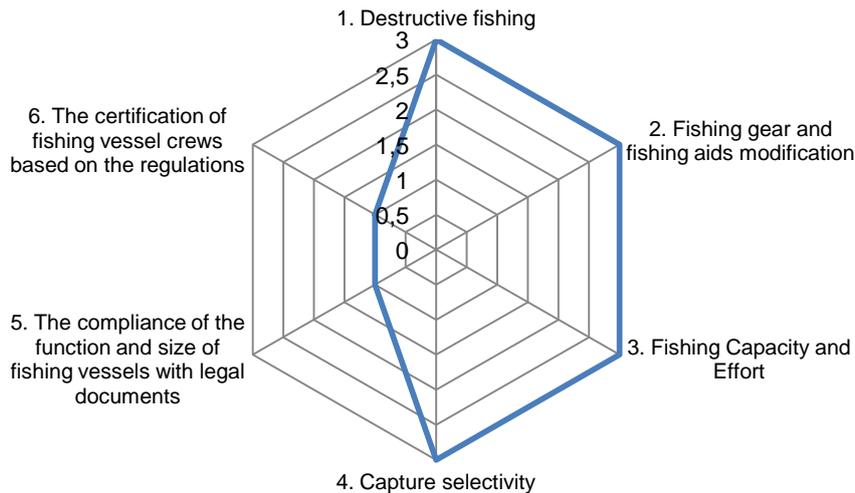


Figure 1 – The Graphic of Fishing Technique Domain Indicators

From Figure 1 above, it shows that the first, second, third and fourth indicators are important concerns. Meanwhile, the indicators that need further attention are the suitability of the function and size of the fishing vessels and the crew's certificate.

To improve these two indicators, it needs to conduct socialization activities to the public about the importance of having a certificate or legal documents for the fishing vessels and crews.

The action plan to maintain each indicator of fishing technique domain can be seen in Table 3 as follows.

Table 3 – The Action Plan for Improving the Fishing Technique Domain

Indicator	Year Value	Maintenance Plan														
		Short-term (Year)					Medium-term (Year)					Long-term (Year)				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Destructive fishing	3	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3
2. Fishing gear and fishing aids modification	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
3. Fishing capacity and effort	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
4. Capture selectivity	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
5. The compliance of the function and size of fishing vessels with legal documents	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3
6. The certification of fishing vessel crews based on the regulations.	1	1	1	1	1	1	2	2	2	2	2	3	3	3	3	3

Destructive fishing:

- It is hoped that the fishing in 1 to 15 years ahead will be good. By that, the Department of Marine and Fisheries is expected to conduct socialization to fishermen who carry out fishing activities to maintain a good shrimp catching so that the resources in the waters remain stable.

The modification of fishing gear and fishing aids:

- In 1 to 15 years to come, it is expected that the Department of Marine and Fisheries will conduct socialization to fishermen who carry out fishing activities to maintain and not modify the fishing gear they use so that the resources in the water will be well maintained.

Fishing capacity and effort:

- In 1 to 15 years to come, it is expected that the fishing capacity and effort becomes better. The Department of Marine and Fisheries is suggested to conduct socialization to fishermen to maintain the fishing efforts. Therefore, the resources will remain sustainable.

Capture selectivity:

- In 1 to 15 years to come, it is recommended that the Department of Marine and Fisheries willing to conduct socialization to fishermen to keep using high selectivity fishing gear so that the resources in the waters will be well preserved.

The compliance of the function and size of fishing vessels with legal documents:

- In 1 to 5 years, a restoration will be carried out in accordance with the function and size of the ship;
- In 5 to 10 years, a corrective action plan needs to be done therefore the Department of Marine and Fisheries is expected to socialize and provide training that is related to the suitability of function and size of the ship. By that, the fishermen in South Sorong Regency can have a fishing permit;
- It is expected that the efforts in 10 to 15 years ahead will be good.

The certification of fishing vessel crews based on the regulations:

- In 1 to 5 years, a restoration for crew certification is done;
- In 5 to 10 years, a maintenance action plan is required. Therefore, the Department of Marine and Fisheries is expected to socialize and provide training concerning crew certification. As a result, the fishermen in South Sorong Regency can have a fishing certificate;
- The efforts in 10 to 15 years ahead are expected to be better.

CONCLUSION AND RECOMMENDATIONS

The analysis of EAFM composite index on the fishing technique domain in South Sorong Regency shows that destructive fishing for banana shrimp (*Penaeus merguensis*) is in good condition with a green modeling flag and an average value of 3. In this study, the indicator of fishing gear and fishing aids modification, fisheries capacity and effort, and capture selectivity is still in good status. Whereas, the indicators that have bad status and need to be prioritized in the future sustainable fisheries management are fishing with legal documents and fishing vessel crew certificates.

It needs an effort to improve the indicators which have a bad status such as fishing with legal documents and fishing vessel crew certificates. The effort can be done through socialization and an application of strict rules in fishing operations so that the fishery resources in South Sorong Regency will be well preserved.

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BY-PRODUCT UTILIZATION OF JAMBAL ROTI SALTED FISH AS THE RAW MATERIALS FOR MAKING FISH SAUCE

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ABSTRACT

Pangandaran is the “*jambal roti*” processing center. The by-product of the “*jambal roti*” processing (salting residual liquid) can cause environmental problems. This study aimed at utilizing the by-product of the “*jambal roti*” processing as the raw material for making fish sauce. The method used was experimental involving three treatments and using the dose of salting residual liquid of 100%, 75% and 50% of the total production of fish sauce as much as 1 L. Every treatment was added with 10% salt and 25% starter (*Aspergillus oryzae*) and fermented for 30 days. The observed variables follow the standard of fish sauce quality requirements according to SNI for fish sauce No.01-4271-1996, including pH, salinity (NaCl), total-N, heavy metal contamination, and microbial contamination. The pH and heavy metal contamination in the fermented liquids (fish sauce) are in accordance with the SNI for fish sauce No. 01-4271-1996. Also, microbial contamination does not have a potential to cause disease and is safe for consumption. After being fermented for 30 days, the total-N increased. The highest total-N was obtained at treatment III (50% of salting residual liquid) or equal to 8465.19 mg/L. Therefore, it can be concluded that the by-product of the “*jambal roti*” processing has the potential to become the raw material for making fish sauce.

KEY WORDS

Fish sauce, jambal roti, salting residual liquid.

Salted fish is one of the traditional archipelagic culinary made of fish meat preserved with the addition of salt. In Indonesia, salted fish are often found in the north and south of Java island. Pangandaran is one of the cities in the southern part of Java island which is famous for its specialty products, that is *jambal roti* salted fish. The *jambal roti* salted fish is popular because of its large size and delicious taste.

The processing of *jambal roti* salted fish produces a by-product in the form of salting residual liquid and fish entrails. Those by-products have not been utilized by the Pangandaran community. According to the *jambal roti* processors, the salting residual liquid will cause unpleasant odors.

Fish sauce is liquid obtained from the fermentation of the fish juice both specially-made or a by-product (Afrianto and Liviawati, 1989). To process fish sauce traditionally, it mixes salt with two or three parts of fish and then fermented at room temperature ($\pm 30^{\circ}\text{C}$) for 6-12 months (Lopetcharat et al., 2001). According to Timoryana (2007), traditional processing of fish sauce has several advantages: cheap processing, simple technique, a little waste, longer expiration date, and distinctive taste and aroma.

Restu's (2017) study revealed that the salting residual process could be used as the raw material for making fish sauce. Therefore, the author tries to utilize the by-products of the *jambal roti* salted fish processing as the raw material for making fish sauce.

MATERIALS AND METHODS OF RESEARCH

The materials used to conduct this study were the salting residual liquid and the fish stomach contents, salt, and starter (*Aspergillus oryzae*). The equipment needed was: jerry can, knives, cutting boards, basins, measuring cups, funnels, pans, filters, and jars.

The main raw materials were the salting residual liquid fermented for 3-6 days and fish stomach contents. Before being used, they were boiled first to kill the pathogenic bacteria. In addition, the salting residual liquid must be characterized first. Later on, the salting residual liquid was given an acidity (pH), salinity (NaCl), protein content (total-N), and heavy metal contamination test to ensure that the raw materials were suitable for making fish sauce.

This research was conducted using the experimental method involving three treatments: Treatment I (100% SRL); treatment II (75% SRL); treatment III (50% SRL) of the total production of fish sauce as much as 1 Liter. Every treatment was added with 10% salt and 25% starter (*Aspergillus oryzae*)

The stages of fermentation are as follows: First, the salting residual liquid was boiled to kill pathogenic microbes. Second, the stomach contents were washed, boiled, and cut into 1-2 cm size.

Third, it was added with 10% salt and 25% starter (*Aspergillus flavus*) then put in a jar and fermented for 30 days at room temperature. The fermented liquid was then filtered and tested according to the SNI for fish sauce No.01-4271-1996 (BSN, 1996).

A testing process of the fermentation result adjusts the SNI for fish sauce no.01-4271-1996 which includes the pH, N-total, salt content (NaCl), microbiological test (total plate number, mold, *Coliform*, *Salmonella*, and *Staphylococcus aureus*) and heavy metals (Pb, Zn, Cu, As, Hg) tests. The test was carried out in the integrated laboratory of Bogor Agricultural Institute.

RESULTS AND DISCUSSION

The acidity degree (pH) of the SRL before being fermented was 7.1 while the pH of the fermented liquid at treatments I, II and III ranged from 5.7-5.9. Data obtained showed a decrease in pH after the fermentation process for 30 days. Ardiansyah (2015) revealed that the pH value of fish sauce decreased because of the length of the fermentation process. The pH value for 30 days fermentation was lower than the pH value for 10 and 20 days fermentation because the glycolysis process converts carbohydrates to lactic acid. The production of lactic acid during the fermentation will decrease the pH value of the final product. Apart from the glycolysis process, a decrease in pH is due to the addition of the salt during the fermentation process. According to Timoryana (2007), a decrease in pH value is due to the ionic bonds between H⁺ ions from water and Cl⁻ ions from salts which produce acidic HCl compounds.

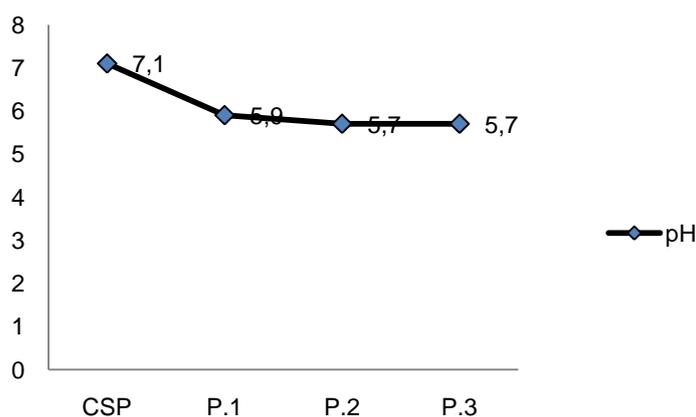


Figure 1 – The Acidity Degree (pH) of the Salting Residual Liquid (SRL) and the Fermented Liquid at Several Treatments (Description: SRL = Salting Residual Liquid; T.1 = Treatment I; T.2 = Treatment II; T.3 = Treatment III)

Data showed that the pH value at treatment II (75% SRL) and treatment III (50% SRL) is lower than the pH value in treatment I (100% SRL). This is assumed because of a mixture

of fish contents with higher carbohydrates at treatment II and III but not with the treatment I. Carbohydrates derived from the fish stomach will be broken down into lactic acid through the glycolysis process. High carbohydrate will produce a final fermentation product with high lactic acid so the pH value will be lower.

Based on the data above, the pH value obtained from those three treatments ranged from 5.7-5.9. According to the National Standardization Body (Badan Standardisasi Nasional or BSN, 1996), the pH for fish sauce referring to SNI 01-4271-1996 range from 5-6. While the pH value of commercially produced fish sauce from several countries in East Asia and Southeast Asia ranges from 4.9-6.23 (Park et al., 2000). Therefore, it can be concluded that the pH value of the fermented liquid is in accordance with the SNI for fish sauce and commercial soy sauce in East and Southeast Asia.

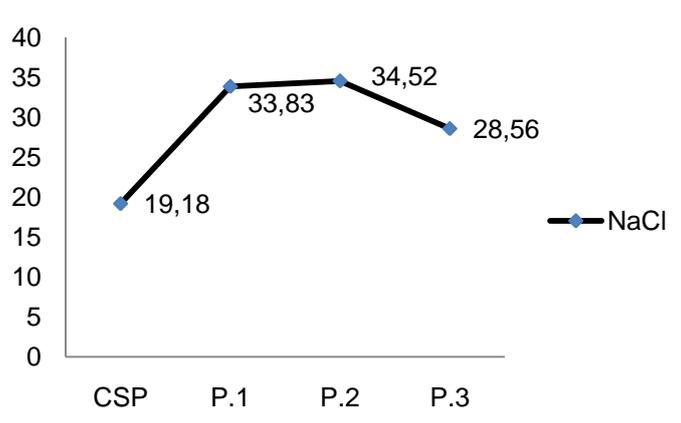


Figure 2 – Salt Content (NaCl, %) of Salting Residual Liquid (SRL) and Fermented Liquid in Several Treatments (Description: SRL= Salting Residual Liquid; T.1 = Treatment I; T.2 = Treatment II; T.3 = Treatment III)

The salt content (NaCl) of the SRL was 19.18% and the fermented liquid of the three treatments ranged from 28.56-34.52%. Data obtained showed an increase in the salt content (NaCl) after being added with 10% salt during the fermentation process. The increase in salt content is due to the salt dissolved in the liquid so that the filtrate salt content is higher than the added salt. In accordance with the research conducted by Subasinghe et al. (1990), the salt content of fish was 1.65% and increased up to 22.85% after being fermented for 30 days. According to Suardani (2012), fish sauce processing contains a proteolytic enzyme to penetrate fish tissue increase the salt content of fish sauce.

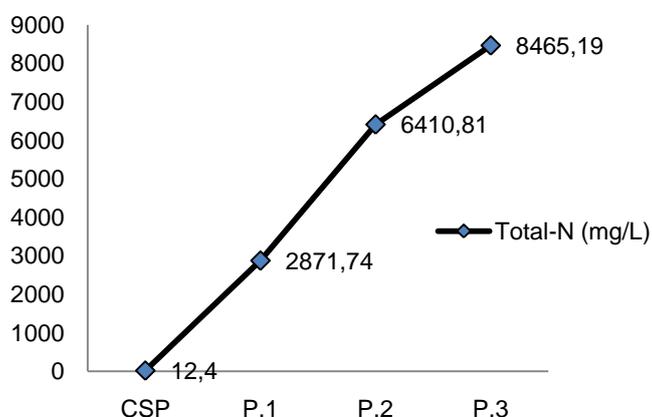


Figure 3 – Total Nitrogen (Total-N) of the Salting Residual Liquid (SRL) and the Fermented Liquids at Several Treatments (Description: SRL = Salting Remaining Liquid; T.1 = Treatment I; T.2 = Treatment II; T.3 = Treatment III)

The results showed that the salt content (NaCl) at treatment I (100% SRL) and treatment II (75% SRL) are higher than the salinity (NaCl) at treatment III (50% SRL) because treatments I and treatment II contain more saline residue than that of treatment III. The salt content of the salting residual liquid was 19.18%. The dissolved salts during the salting process will increase the salt content. According to SNI No 01-4271-1996, the salt content for the fish sauce is 19-25%. The results showed that the salt content (NaCl) of the raw material was too high compared to the salt content (NaCl) of fish sauce according to SNI. In addition to providing saltiness in soy sauce, salt also plays a role in preventing undesirable microbial growth, except halophilic lactic acid bacteria to add specific taste and aroma and to eliminate the bitter taste caused by the breakdown of fish protein protease enzyme (Ebine, 1979).

The total N-value of the SRL of the *jambal roti* salted fish was 12.40 mg/L, while the total-N value of the fermented liquid at the three treatments ranged from 2871.74–8465.19 mg/L. This shows an increase in the total N-value after the fermentation process. The increase in total N was due to the hydrolysis of proteins. A protein hydrolysis reaction during the fermentation process breaks the peptide bond which converts proteins into amino acids and peptides containing N elements. This is in accordance with what Indrawati (1983 and Santy 1992, as quoted in Kurniawan, 2008) proposed that the longer the fermentation, the more the protein molecules solved, so the dissolved N tends to increase.

The highest total-N value was at treatment III (50% CSP) of 8.465.19 mg/L. While the lowest total N-value was at treatment I (100% CSP) of 2,871.74 mg/L. The high total N-value at treatment III was alleged because treatment III used more fish contents than treatments I and II. The protein content in the fish entrails is more than in the salting residual liquid. The protein was then hydrolyzed into amino acids and peptides containing N elements.

According to Lopetcharat and Park (2002), the quality and the price of fish sauce is generally based on the total N-levels, while amino nitrogen contents are usually used as an indicator of the degree of fermentation. According to the Thai Industrial Standard (1983), total-N more than 20,000 mg/L is classified as quality I and 15,000-20,000 mg/L as quality II. Whereas according to Codex Alimentarius, the minimum content of N-total is 10,000 mg/L (Codex, 2011). Dissaraphong et al. (2006) reported that the N-total of Tuna Viscera was higher than 20,000 mg/L after being fermented for four months. It indicates that the fermentation of fish sauce from viscera Tuna can be obtained after being fermented for four months. The results showed that after 30 days, the fermentation of the raw materials with 10% salt addition still did not meet the Codex Alimentarius standard in terms of N-total. This was alleged to have short fermentation time and high salt content. Ardiansyah's (2015) research showed that fish sauce with trash fish as the raw material fermented for 30 days with the addition of 9% papain enzyme produced a total N-value of 8.320 mg/L. Rianigsih (2016) also explained that the N-total for a fish sauce made from viscera fish (*Arius sp.*) with the addition of 25% salt is lower than the addition of salt 15% and 20%. This indicates that the high salt content during the fermentation process slows down the hydrolysis of protein. According to Chapters et al. (2010), salt will slow down the activity of protease enzymes and inhibit bacterial growth, including proteolytic bacteria.

Chemical testing is one of the important things in the agri-food, it is not only obliged by the government to include in a food product but also provides a function to guarantee food quality and safety. One of the chemical testings that has to be conducted is a heavy metal contamination testing.

Heavy metal contamination in the fish habitat can accumulate in the fish body. Based on Darmono (2008), heavy metals can accumulate in the fish body through several paths, among others, breathing (respiration), food channels, and the skin (diffusion). The metal is absorbed in fish meat by the blood which binds to blood proteins and is then distributed throughout the body's tissues. The average heavy metals found in fish meat sequentially from the largest to the smallest is Pb>Cu>Cd>Hg. According to the BSN (1996), the quality requirements of fish sauce referring to SNI for Fish Sauce No.01-4271-1996, a heavy metal contaminants testing that must be done is Lead (Pb), copper (Cu), Zinc (Zn), mercury (Hg), and Arsenic (As) testing.

Table 1 – Heavy Metal Contamination of the Salting Residual Liquid and the Fermented Liquid at Various Treatments

Type of test	SRL	Fermented Liquid (mg/L)			INS
		I	II	III	
	<0.04	<0.04	<0.04	<0.04	Max.2,0
Cu	<0.006	0.03	0.05	0.12	Max.20.0
Zn	0.26	0.68	5.24	9.26	Max.100.0
	0.001	<0.0002	<0.0002	<0.0002	Max.0.05
As	<0.0004	<0.0004	<0.0004	<0.0004	Max.1.0

Description: Pb = Lead; Cu = Copper; Zn = Zinc; Hg = Mercury; As = Arsenic; SRL = Salting Residual Liquid.

It is known that the contents of heavy metals (Pb, Cu, Zn, Hg, and As) in the SRL and the fermented liquids for all treatments are below the threshold level of heavy metals according to SNI for Fish Soy Sauce No.01-4271 -1996. It can be concluded that the fermented liquid from the *jambal roti* salted fish by-products is safe from heavy metal contamination.

In terms of microbiological quality control, laboratory testing is needed to isolate and identify microbial contaminants in food. Microbes found in foods are bacteria and mold/fungus which lead to undesirable changes such as appearance, texture, taste, and smell. According to SNI for Fish Sauce No.01-4271-1996, microbiological contaminants testing to consider is the Total Plate Number (TPN), Coliform, Salmonella, Staphylococcus aureus, and mold.

Table 2 – Microbial Contamination of Fermented Liquids at Various Treatments

Type of test	Treatment			INS
	I	II	III	
Total Plate Number (cfu/ml)	2.3×10^4	3.5×10^4	3.2×10^4	Max. 10^4
Coliform (MPN/ml)	<1.8	5.6	5.6	<3
Salmonella sp (/25ml)	Negative	Negative	Negative	Negative
Staphylococcus aureus (cfu/ml)	<1	<1	<1	Negative
Mould (cfu/ml)	<1	<1	<1	Negative

According to SNI No 01-2332.3-2006, the method of determining Total Plate Numbers (TPN) is used to determine the total number of aerobic and anaerobic (*psychrophilic*, *mesophilic*, and *thermophilic*) microorganisms found in fishery products (BSN 2006). One parameter of the quality requirements of fish sauce according to SNI for Fish Sauce No.01-4271-1996 states that TPN values are no more than 104 cfu/ml. The results of the TPN test on the fermented liquids from the three treatments ranged from 2.3 - 3.5×10^4 cfu/ml. Based on these data, the fermented liquid of the *jambal roti* salted fish by-products has met the quality requirements considered from the TPN value.

A *coliform* is a group of bacteria used as an indicator of dirt pollution and poor sanitation conditions. The test results showed that treatment II and treatment III using fish stomach as the raw materials contains higher *Coliform* compared to the treatment I which did not use the fish stomach contents. According to Supardi and Sukanto (1996), *Coliform* is a normal flora in the digestive tract of animals and humans, so that it is suspected in treatments II and III originating from the entrails of fish. According to SNI for Fish Sauce No.01-4271-1996, the quality requirements for Coliform is <3 MPN/ml. Whereas, the result of the Coliform test at treatment II and III was 5.6 MPN/ml. Coliform is a family of Enterobacteriaceae. According to the National Agency of Drug and Food Control (NA-DFC) (2016), the *Enterobacteriaceae* in fish sauce is said safe if not exceeding 104 colonies/g. This bacterium is also sensitive to heat and can be activated at the temperature of food pasteurization or during cooking. Microbiological (Coliform) tests were carried out on fermented liquids without giving sterilization (boiling) treatment first. The next stage was the process of making fish sauce, it boiled the fermented liquid and added with seasoning. Through that stage, the Coliform is expected to be activated.

According to Nugraheni (2010), *Salmonella* is a gram-negative rod-shaped bacteria and does not form spores. It consists of about 2,500 pathogenic serotypes both in humans or animals and aerobic or facultative anaerobes. These bacteria are not indicators of sanitation, but food safety. The presence of these bacteria in water or food is considered dangerous because all *Salmonella* serotypes are pathogenic. Thus, it is very important to know the presence of these bacteria in a food product. These bacteria will cause infection if ingested and enter the body with symptoms of gastroenteritis. The results revealed that the fermented liquid for all treatments was negative. This was in accordance with the SNI No.01-4271-1996 for the fish sauce.

The number of *Staphylococcus aureus* cells in the fermented liquids is <1 cfu/ml. According to Supardi and Sukamto (1996), the number of *Staphylococcus aureus* bacteria in food can cause intoxication symptoms if reaches 10^6 cells/g of food or more. It can be concluded that the *Staphylococcus aureus* <1 cfu/ml in the fermented liquids does not have the potential to cause symptoms of intoxication.

The quality requirements of fish sauce for molds according to SNI No. 01-4271-1996 are negative, while the test results of molds on fermented liquids are <1 cfu/ml. However, according to SNI 7388: 2009, the maximum limit of microbial contamination on food for mold contamination in fish sauce is 5×10^1 colonies/g (BSN, 2009). Nugraheni (2010) also stated that the results of mold testing on soy sauce with an average colony <10 cfu/ml proved to be safe.

CONCLUSION

The results reveal that the pH values and heavy metal contamination in the fermented fish sauce are in accordance with SNI for Fish Sauce No. 01-4271-1996. The salt content of the fish sauce is too high and the N-total never met the standard. Microbial contamination does not have the potential to cause disease and is safe for consumption. It can be concluded that the *jambal roti* salted fish processing by-product has the potential to become the raw material for making fish sauce.

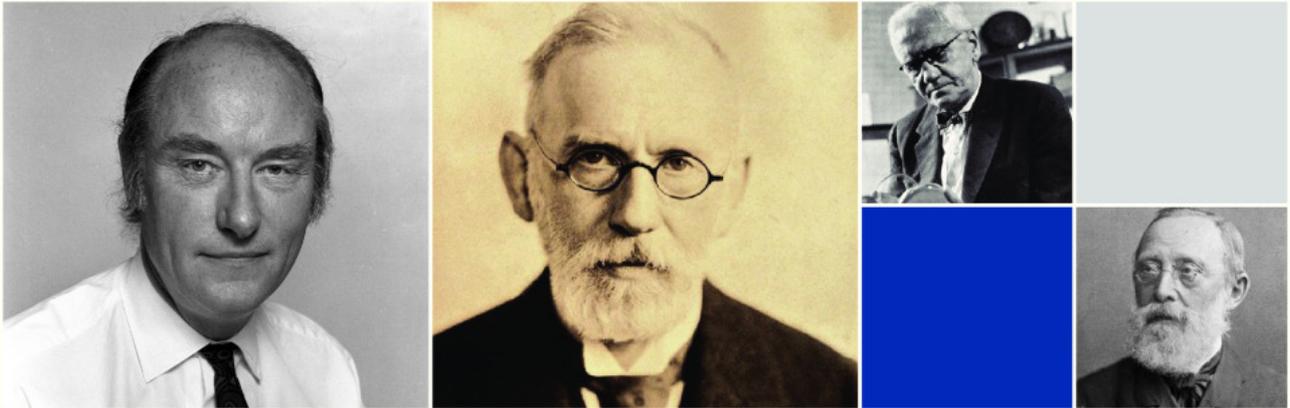
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